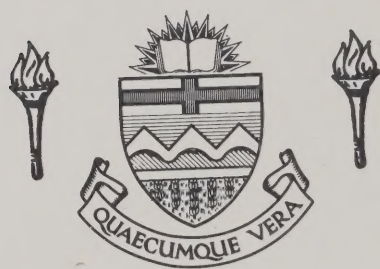


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THE UNIVERSITY OF ALBERTA

AN EXPLORATORY STUDY OF TEACHER-PUPIL VERBAL
INTERACTION IN PRIMARY READING GROUPS

by



Margaret Patricia Jane Browne

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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ABSTRACT

The major purpose of this study was to explore and describe, under natural conditions, the affective and cognitive dimensions of teacher-pupil verbal interaction in first and third grade basal reading lessons in self-contained classrooms, where pupils were organized into high, average, and low reading groups. In addition, differences in the patterns of behavior observed in the reading groups and reading classes at the two grade levels were analyzed.

Audio-tape recordings collected in five first and four third grade reading classes, supplemented by anecdotal records of classroom events, were analyzed under laboratory conditions with Flanders' Interaction Analysis and the Focused Interaction Episode in Reading (FIER). The FIER analyzed the specific reading content of the verbal behavior and was developed for the investigation. The development of an appropriate observational system for analyzing reading lessons was an important objective of the study because such a system was required for the present research and is required for future analyses of the teaching of reading. The FIER, while limited by its complexity, generated considerable information about the reading content of the verbal interaction observed, and provided basic data for the development of sixteen reading categories that could be integrated with Flanders' model for observing and interpreting classroom verbal interaction. The Observational System for the Analysis of Primary Reading Lessons, therefore, represented a synthesis of the Flanders and FIER analyses. A pilot test of the initial system was reported, as were suggestions for future research.

The Flanders and FIER analyses gave rise to many specific findings pertaining to differences in the affective and cognitive dimensions of the verbal behavior observed in the reading groups and the reading classes. The findings supported a number of conclusions, the broadest of which were:

(1) Teachers subscribing to the same approach to the teaching of reading emphasize different reading-centered activities in their reading lessons.

(2) In implementing the basal reading program, teachers are influenced as much by their perceptions of the needs of learners, as by the stated objectives and activities of the program. The Flanders' analysis revealed statistically significant differences in the patterns of interaction when high, average and low reading groups were compared. The FIER analysis pointed up differences in the content of the teacher solicitations, pupil responses and teacher reactions specific to the level of the reading group.

(3) While there are differences in the behavior patterns of first and third grade teachers in basal reading lessons, the behavior observed in low grade three reading groups was more like low first grade groups, than more able reading groups at the third grade level.

Many implications were derived from the findings and conclusions of this study. Most important was the obvious need for more studies concerned with the analysis of teacher-pupil verbal interaction during the teaching of reading, under many different methodological and organizational conditions, and with different types of learners.

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CHAPTER 1

STATEMENT OF THE PROBLEM

BACKGROUND

While there is speculation about the role of reading in the electronic communications age, reading, the first R, maintains its primacy as the first instructional goal of the school. Add to this the recent proclamation that the pursuit of effective reading constitutes a basic human right, and we find that pressures upon the school to improve the teaching of reading for all children continuously increase.

Improvement of the teaching of reading has had high priority in educational circles, as evidenced by the research and commentaries that appear with increasing frequency in professional journals and texts. However, despite these efforts, there still exists a sense of dissatisfaction, and the general feeling expressed is that we could be accomplishing more in the teaching of reading.

One response to this dissatisfaction has been a tendency for criticism to focus on research in reading, not only in terms of what has been done, but for what is not being done.

Commenting on reading methods studies, for example, Townsend (1966) argued that

Actual or apparent contradictions in research findings can be traced to differences in teacher understanding or motivation. Often it must be remarked that great pains are taken to train teachers in an "experimental" method, while those using a "control" method are assumed to be following their traditional steps with equal fervor and insight. Can such an assumption be supported? (p. 529).

To some extent, Townsend was focusing on the same problem raised later by Bond and Dykstra (1968) who examined the research results pertaining to methods for teaching beginning reading and concluded that the success of a method depended very much upon the teacher responsible for implementing the method under normal classroom conditions. Concerned with that finding, they pointed out that:

Future research might well center on teacher and learning situation characteristics.... The tremendous range among classrooms within any method points out the importance of elements in the learning situation over and above the methods employed. To improve reading instruction, it is necessary to train better teachers of reading rather than to expect a panacea in the form of materials (p. 123).

Both Jenkinson (1968) and Artley (1969) have commented that the major problem we face in bringing about improvement in the teaching of reading is that we have so little information about teacher behavior in the reading classroom. While Jenkinson stressed the need for such studies, Artley argued that part of the problem, to date, has been that the teacher effectiveness studies have been too global. He noted that too much emphasis has been concentrated upon the characteristics of the good teacher per se rather than the good teacher of reading.

Artley went even further by pinpointing similar problems in the classroom interaction studies that are being carried out, and expressed the following concerns:

...the teacher is being studied as a generalist, nonspecific to any teaching area or any grade level.... Yet we know that there are differences among teachers in the way they handle given instructional areas and levels. (p. 243)

...such studies... have failed to give us any information about the teacher's teaching procedures, the content she teaches, the understanding she must have, or the commitment she has made to clinic teaching. (p. 243)

...these studies are concerned only indirectly with the product of teaching, that is, changes in pupil behavior or with the

cognitive aspects of learning in the way of skills, abilities, understandings, etcetera. (p. 243)

Beyond the need to define teaching behaviors in order to bring about improvement in the teaching of reading, Townsend's comments point up the failure of reading research to examine explicitly innovations in the classroom setting.

Innovations have not only affected the materials and methods which have found their way into reading classes, but have also involved the restructuring of the learning environment through the introduction of different organizational plans. At the heart of these plans is the recognition of the need to differentiate instruction in line with differences in individual potential for learning to read.

Research evidence supporting the efficacy of grouping pupils on the basis of their achievements and/or abilities has been sketchy, despite the widespread popularity of grouping for reading in primary classes.

Franseth and Koury (1966), after an exhaustive study of research in grouping practices traced part of the problem to the failure of the research studies on grouping practices, as they related to pupil learning, to reveal what the teachers responsible for implementing the different plans were actually doing in their classes; how they worked with pupils; or the nature of the interaction between teachers and pupils in the group context. They concluded that

It may well be that differences in pupil gains or losses, sometimes attributed to particular grouping procedures, may be the result of what happens between the teacher and the children after groups are formed. (p. 61)

In a more recent review of the results of ability grouping studies, Heathers (1969) reached a conclusion similar to that expressed

by Franseth and Koury and criticized the research in grouping on several counts. He noted that while the plans demanded that teachers differentiate their instruction in line with the abilities of pupils, few researchers clearly specified how that differentiation was to be accomplished. And, even where they did, few researchers followed their ideas through into the classroom in order to determine how those ideas were articulated in practice. Moreover, Heathers went so far as to suggest that the studies of the past decade strongly supported "the view that ability grouping is associated with detrimental effects on slow learners (p. 566)."

The two major points made in this brief discussion, including the general need for studies of the teaching of reading under normal classroom conditions, and concern for the low achievers in intra-class reading groups were basic to the research reported in this study.

STATEMENT OF THE PURPOSES OF THE INVESTIGATION

While this study had a number of purposes, its major purpose was to explore and describe under the natural conditions of the classroom, teacher-pupil verbal interaction in first and third grade basal reading classes where pupils were grouped for the teaching of reading into high, average, and low reading groups. In specifying natural classroom conditions, it is important to understand that with the exception of the possible effects of the presence of the observer and simple recording equipment no attempt was made to influence the classroom procedures followed in these classes in any way. To the extent that any teacher

controls what goes on in the reading lesson, those were the conditions maintained in the study.

The verbal behavior observed in a number of reading classes was analyzed from two distinct perspectives: the affective and the cognitive. In other words, the verbal behavior was examined from the standpoint of the social-emotional characteristics of the observed patterns of behavior as well as from the standpoint of the reading content of the observed behavior.

To some extent, one of the purposes of this investigation was to determine the value of a highly generalizable system for the analysis of classroom verbal interaction, Flanders' Interaction Analysis (Flanders, 1965), in exploring the differences in the patterns of interaction where only the achievement or ability levels of the pupils differed. During the course of the study an attempt was made also to subscript several of the original Flanders' categories in order to make more explicit the reading content of the observed behavior. That subscripting constituted a secondary purpose of the study that had not been predicted at the time the study was initiated.

Since there was no existing system for the analysis of the content of primary reading lessons that would take into account the specific behaviors which were to be studied in this investigation, one of the purposes of this study was the development of just such a system. Beyond its application in this study, it was anticipated that the system might prove valuable to other researchers interested in the analysis of the teaching of reading or to teachers interested in analyzing their own behavior.

During the course of the investigation, it was recognized that

the content analysis system, the Focused Interaction Episode in Reading (FIER), while useful in the present investigation would be too complex for most teachers and most researchers. Despite this finding, the search for a system was not ignored and gradually as the two major analyses progressed, it became apparent that elements of the Flanders' and the FIER might be synthesized in such a way that an observational system for the analysis of primary reading lessons would evolve. One of the purposes of the study became that of devising such a system and testing it out in a small pilot investigation.

STATEMENT OF THE PROBLEM

To accomplish the purposes of this study the major problem was to describe the affective and cognitive dimensions of teacher-pupil verbal behavior in regular basal reading classes at the first and third grade levels where pupils were grouped for the teaching of reading on the basis of the teacher's judgments of their achievement and/or abilities in reading.

To describe the affective component of the observed behavior, Flanders' Interaction Analysis was used for the analysis and interpretation of the verbal behavior observed in primary reading groups. To analyze the content of that behavior, the FIER was used in the analysis and interpretation. In using each technique, the problem was to describe the differences, if any, that characterized the reading groups in the different classes at the two grade levels.

DEFINITION OF TERMS

A number of terms having specific meaning and used frequently in this study are defined in this section:

(1) Reading teacher. The teachers in this study have been referred to as reading teachers and/or teachers of reading because each is responsible for teaching basic reading skills to pupils in self-contained classrooms. The designation of these teachers as reading teachers, therefore, does not imply that they were solely responsible for teaching reading in special reading classes, developmental or remedial, nor does it indicate that they have qualifications which set them apart from other regular classroom teachers at the first and third grade levels.

(2) Reading lessons. The term reading lesson or reading class is used in this study to indicate that the focus of this investigation was upon the curriculum area of reading taught as part of the regular instructional program of studies in primary classes in the Province of Alberta. The lessons observed in this study each took place in regular self-contained first and third grade classes under the guidance of the classroom teacher. Since departmentalization is rare in the primary grades, these conditions are representative of the kind of organization for the teaching of reading found in many Canadian school systems.

(3) Reading groups. The pupils in these reading classes were assigned to a sub-group in the class by the teacher for the purposes of learning to read. The assignment was based solely upon the teacher's judgment of the pupils' abilities and/or achievements in reading. Prior to the investigation, each teacher reported to the investigator

that she had three groups in her class that she identified as high, average, or low in line with the general level of achievement of the group. While each teacher had her own terminology for identifying these groups, in this report they will be referred to as high, average, and low reading groups. It should be understood that these terms may not accurately reflect the abilities and/or achievements of any one pupil but only identify children as they were perceived by their teacher in relation to the other learner-readers in the class. Where high and average groups were taught as one group, this group is referred to as the combined group.

(4) Primary. This term is used when a collective reference is made to the classrooms, teachers, pupils, or activities when grade level is not specified. The term has been in common use to identify pupils in grades one through three, or the first division of the elementary school.

(5) Interaction. This term is defined by Withall and Lewis (1963) as a "behavioral transaction" or a relation between persons such that "the behavior of either one is stimulus to the behavior of the other" (English and English, 1958, p. 270: in Withall and Lewis, p. 682).

(6) Affective interaction analysis systems. This term identifies classroom observation schemes that focus upon the description and interpretation of the social-emotional dimensions of classroom verbal interaction. Flanders' Interaction Analysis has been identified as an affective system (Boyd and Devault, 1966).

(7) Cognitive interaction analysis systems. This term identifies classroom observation schemes that focus upon the description of the content of the intellectual activity in the classroom (Boyd and Devault,

1966). The Focused Interaction Episode in Reading (FIER) represents such a system, since it was designed to describe the reading content of the verbal behavior observed in reading classes.

Certain terms used in this study are primarily specific to the instruments used in the analysis. While these terms are made explicit in the discussion of the instruments, several of the more important terms are presented here.

(8) Direct influence pattern. Flanders (1967) uses this term to define those teaching behaviors which restrict pupils' freedom to direct their own behavior in the classroom. Direct influence, according to Flanders,

...consists of stating the teacher's own opinion or ideas, directing the pupil's action, criticizing his behavior, or justifying the teacher's authority or use of that authority (Amidon and Flanders, 1967, p. 109).

(9) Indirect influence pattern. Flanders uses this term to define those teaching behaviors which allow pupils freedom in the direction of their own behavior in the classroom. Indirect influence, according to Flanders,

...consists of soliciting the opinions or ideas of the pupils, applying or enlarging on those opinions or ideas, praising or encouraging the participation of pupils, or clarifying and accepting their feelings (Amidon and Flanders, 1967, p. 109).

(10) Indirect/direct ratios. In analyzing the influence patterns of teachers under varying classroom conditions, Flanders (1965; Amidon and Flanders, 1967) proposed the calculation of two ratios to be used in describing the observed behavior. First, attention is focused upon the relative number of indirect and direct statements in that:

The total number of tallies in columns 1, 2, 3, and 4 is divided by the total number of tallies in columns 5, 6, and 7, plus the total in columns 1, 2, 3, and 4, to find the I/D ratio or the

ratio of indirect to direct teacher statements. An I/D ratio of 15 means that for every indirect statement there was one direct statement; an I/D ratio of .67 means that for every two indirect statements there was only one direct statement etc. (Amidon and Flanders, 1967, p. 37).

A second ratio, the revised I/D ratio, is calculated "in order to find out the kind of emphasis given to motivation and control in a particular classroom (Amidon and Flanders, 1967, p. 37). The revised I/D ratio is calculated by summing the number of tallies in columns 1, 2, and 3 and dividing by the number of tallies in columns 1, 2, 3, plus those in columns 6 and 7. Amidon and Flanders propose that these categories are more concerned with motivation and control and less with the presentation of subject matter. Thus, the ratio gives information as to whether the teacher is direct or indirect in his approach to motivation and control. (Further discussion of these ratios is included in Chapter 4.)

(11) Pedagogical moves. This term was used by Bellack and others (1966) to indicate that teachers and pupils interact in a cyclic fashion--with the action of one having an effect on the behavior of the other. Bellack specified a series of four pedagogical moves in the cycle: structuring, soliciting, responding, and reacting. Three of these moves are included in the content analysis system (FIER) developed and used in this study.

(12) Soliciting behavior. This term identifies an act on the part of the teacher which is meant to initiate a response from the pupils (Bellack and others, 1966, p. 18). In the FIER analysis the soliciting behaviors analyzed are those that focus specifically on the reading content of the lesson.

(13) Response behavior. This term identifies an act on the part

of the pupil or pupils that is a response to the soliciting behavior of the teacher (Bellack and others, 1966, p. 18).

(14) Reacting behavior. This term identifies an act on the part of the teacher in reply to the responding move of the pupil or pupils (Bellack and others, 1966, p. 18, 19). Reacting behaviors in the FIER are broadly defined as confirming (indicating the response was acceptable); corrective (indicating the response was not acceptable); and, extending (calling for more information).

(15) Episode. The term behavioral episode was used by Waimon (1962) in identifying samples of behavior "within the larger stream of behavior, which have a discernible beginning and end (p. 356)." Episode has been used in this study to identify a behavioral segment consisting of the three pedagogical moves identified as teacher soliciting behavior, pupil responding behavior, and teacher reacting behavior. The episode includes only that behavior which focuses upon the reading content of the lesson and therefore represents a specific behavioral segment.

(16) Miscues. This term was used by Goodman (1969) to identify oral reading errors in a "non-evaluative manner." Specifically, Goodman described miscues as "...each instance where a reader's observed response (O.R.) differs from the expected response (E.R.)...(p. 19)." An example of a miscue would be monkey (E.R.): monkeys (O.R.).

(17) Subscripting. This term is used to designate the process where an existing behavioral category in an observation system is subdivided to account for a more specific description of an observed behavior. In this study, for example, Flanders' Category 8 (Pupil responses) was subscripted to account for pupils' responses which involved them reading orally.

(18) Basal reading approach. A generic term for an approach to the teaching of reading which depends upon the use of a series of readers, accompanied by teachers' guidebooks and supplemental materials such as workbooks. The approach is described in terms of an introduction to new concepts through a careful control of the vocabulary and involves a sequential, balanced skill development program which extends from beginning reading to Grade 6 or beyond.

THE ASSUMPTIONS

The following assumptions were basic to the investigation:

(1) That, the verbal behavior of teachers and pupils represents an adequate sample of the total interaction taking place in the observed reading lessons, sufficient for the purposes of this study.

(2) That, audio-records of teacher-pupil verbal interaction, supplemented by anecdotal records of classroom events, provide a sufficient sample of the total verbal behavior observed in the reading lessons.

(3) That, analysis of teacher-pupil verbal interaction in reading lessons with children in ability and/or achievement level reading groups can provide insights into the ways teachers and pupils interact, when the pupils are perceived to be at different levels of ability and/or achievement.

(4) That, the assignment of a pupil to a reading group, nominally described as high, average, and low, in the specific class context, reflects the teacher's perception of the reading abilities and/or achievements of the pupil, although it may not reflect those abilities

and/or achievements accurately.

(5) That, a careful and descriptive analysis of teacher-pupil verbal interaction during a sample of reading lessons can provide insights into the kinds of verbal behaviors used by classroom teachers in the teaching of reading.

(6) That, categorical descriptions of observed behavior represent an accurate, if generalized, account of the specific content of observed behavior.

(7) That, there is much to be learned in an exploratory study of teacher-pupil verbal interaction by examining the verbal behavior of teachers and pupils in regular reading lessons, where no attempt has been made to influence the content or procedures of the lesson.

LIMITATIONS OF THE STUDY

A number of limitations recognized prior to and during the course of the investigation which must be considered in the interpretation of the findings and conclusions of this study are set forth in this section:

(1) This study is exploratory and descriptive and any attempt to evaluate the absolute value of any teaching behavior is beyond its scope.

(2) The teachers in this study were recommended to the investigator by their respective school boards and then agreed to participate in the study. They were, therefore, a select sample of teachers and may not be representative of the teaching population as a whole.

(3) The children who comprise the pupil sample for this study were included only on the basis of their membership in their respective

reading classes. It was not possible to control for any personal or situational characteristics that might set one class of pupils apart from their peers, and therefore, these pupils in this study may not be representative of the population of primary pupils.

(4) The major reading program operating in these classes was designated as a basal reading approach by the teacher in charge of the class. That the teacher perceived her approach as a basal reading approach was more important to the selection of the classrooms than the specific programs operating in the classes. Therefore, several different reading series (see Appendix A) were used in these classes and these programs could account for the behaviors observed in the classes. That is, the observed behavior may have reflected the specific program rather than the actions of the teachers in implementing the programs in their classes.

(5) The pupils in these classes were assigned to their reading groups on the basis of the classroom teachers' perceptions of their abilities and/or achievements in reading. Since the reading achievements of pupils were not questioned, there is no information to specify that placement was necessarily accurate. The applicability of the findings to classes having different organizational plans or where pupils were assigned to their reading groups on the basis of other criteria is beyond the scope of this study.

(6) There was a five-week interval between the first and the last visit at each grade level. It is possible that some of the differences noted may reflect changes appropriate to the increased reading proficiency of pupils over that period of time, especially at grade one level.

(7) The investigation was both initiated and principally carried out by a single investigator. While each of the analyses was subjected to inter-observer tests of reliability, the analyses were the responsibility of the investigator and some distortion may have been introduced unwittingly.

(8) The anecdotal records that served to extend the audio-taped samples of verbal behavior were subjective accounts prepared by the investigator in each classroom and could not, therefore, be verified by an independent observer. This limits their reliability and the findings should be accepted with caution.

(9) The pupil-pupil interaction observed in the independent reading groups was carried out in situ by the observer on a random basis, and was, therefore, not verified by an independent observer. The findings should, therefore, be reviewed with caution.

(10) The supplementary categories subscribed to the original Flanders' categories were not subjected to a reliability check and the conclusions based on that part of the analysis must be accepted very tentatively.

Since no attempt was made to influence the normal practices of the teachers of the classes observed in this study, a number of limitations reflecting the specific procedures of individual teachers were imposed upon the investigation during its progress. These limitations were:

(1) Consideration of the behavior patterns observed at the third grade level were restricted by the necessity to delete one third grade class from the analysis after the observations had been carried out. The deletion of this class reduced the verbal behavioral sample avail-

able for the analysis of third grade reading groups. Because less data were available, the comparisons across the two grade levels were restricted. Any findings and conclusions about first and third grade reading lessons must, therefore, be accepted cautiously, especially when interpretation is based upon frequencies and not proportions.

(2) Comparisons across the two grade levels of the high and average groups could not be explored in the detail anticipated since third grade teachers tended not to meet their high groups as often, or met them in the context of the high-average combined group setting. While some findings have been reported, and certain conclusions suggested, the writer acknowledges that the information available for the analysis was very limited.

(3) While the length of reading lessons should have been determined, in part, by recommendations in the provincial teaching guides, there were major differences across classes in the length of the lessons observed. These differences in lesson length may have influenced some of the patterns observed, especially when classes at the same grade level were compared. The problem was further complicated by the differences in length of the individual group lessons.

THE RESEARCH QUESTIONS

While a number of questions, both broad and specific, were explored in this investigation, it was recognized that the ultimate value of the study would rest not in the questions answered, but in the questions raised by the various analyses. Within this context, one major question gave direction to the analysis and interpretation of the data.

That question, having two parts, was: What would an exploratory, descriptive study of the affective and cognitive dimensions of teacher-pupil verbal behavior observed in first and third grade reading lessons under the normal conditions of the classroom reveal about the nature of the teacher-pupil verbal interaction when:

high, average, and low reading groups were compared within classes, across classes at the same grade level, across classes at the first and third grade levels, and

teachers subscribing to the same method of teaching reading were compared at the same grade level and across the first and third grade levels?

Specific questions explored with the different observational systems are stated in the following sections. Several hypotheses have been recorded in the section dealing with the Flanders' analysis. These hypotheses are stated only because the statistical procedures initiated in connection with the Flanders' analysis called for the statement of null hypotheses. While these hypotheses were prescribed and tested, this investigation is presented as an exploratory and descriptive study.

Flanders' Interaction Analysis

In analyzing the affective dimensions of the verbal behavior observed, the Flanders' Interaction Analysis made specific the kinds of interpretations that could be made. Within the context of the Flanders' analysis the following questions were explored:

(1) Would the patterns of verbal interaction observed in the reading groups over four periods of observation be significantly different, when the high and average groups were compared; the high and low groups were compared; and the average and low groups were compared? The statistical analysis related to this question required that the follow-

ing null hypotheses be tested:

- 1.1 Null hypothesis That there are no significant differences in the patterns of interaction when the high and average reading groups are compared in each class
- 1.2 Null hypothesis That there are no significant differences in the patterns of interaction when the high and low reading groups are compared in each class
- 1.3 Null hypothesis That there are no significant differences in the patterns of interaction when the average and low reading groups are compared in each class.

(2) Would the high, average, and low reading groups differ in terms of the proportions of behavior recorded in each of the ten Flanders' categories? While a descriptive analysis of the observed differences was relied upon, the statistical analysis required the following null hypothesis:

- 2.1 Null hypothesis That there are no significant differences in the proportion of behavior in each of the ten Flanders' categories (Categories 1 to 10), when:

the high and average reading groups are compared in each class

the high and low reading groups are compared in each class

the average and low reading groups are compared in each class.

(3) Are there differences when the high, average, and low reading groups in each class are compared in terms of the proportions of behavior recorded in the following areas of the matrix:

- 3.1 the proportions of indirect and direct teacher behavior (I/D Ratios)
- 3.2 the proportions of teachers' controlling and motivation behaviors (Revised I/D Ratios)
- 3.3 the proportions of teacher-talk and pupil-talk.

(4) Do the patterns of interaction of the high, average, and low reading groups in each class remain stable from one day's lesson to the

next, or do they change? To determine the statistical significance of the observed differences, the analysis called for the following null hypothesis:

- 4.1 Null hypothesis That there are no significant differences in the patterns of interaction when each observation session is compared with each other observation session for:

the high reading group in each class

the average reading group in each class

the low reading group in each class.

Questions about the individual lessons were also raised regarding the I/D ratios, the Revised I/D ratios, and the proportions of teacher-pupil talk (referred to in Question 3 above).

Each of these questions about the reading groups was also explored in terms of the differences across classes at the same grade level, and across the two grade levels, except that the statistical analyses were not applied to determine the statistical significance of the observed differences.

The FIER Analysis

The content analysis involving the application of the Focused Interaction Episode in Reading made it possible to explore a number of questions about the content of the verbal interaction in primary reading groups. The general questions which guided the analysis of the content were related to the three major parts of the episode: the teacher solicitations; the pupil responses; and the teacher reactions. The questions were:

- (1) What was the content of the teacher solicitations, the pupil responses, and the teacher reactions in the reading lessons observed?

(2) What were the differences, if any, in the content of the teacher solicitations, the pupil responses, and the teacher reactions, when the content of the behavior at the two grade levels was compared?

(3) What were the differences, if any, in the content of the teacher solicitations, the pupil responses, and the teacher reactions when behaviors observed in the reading group at the two grade levels were examined and compared?

(4) What were the differences, if any, in the content of the teacher solicitations, the pupil responses, and the teacher reactions when the reading groups in each of the classes observed were examined and compared?

The Observational System for the Analysis of Primary Reading Lessons

In using the new system, the major question asked was whether or not the system would work as an analytical tool for the observation of primary reading lessons. Beyond that, questions derived from the major analyses were explored to some degree in the application of the new system, in order to make explicit its value in analyzing observed behavior in reading.

SIGNIFICANCE OF THE STUDY

The distinct significance of this study must rest ultimately with its contribution to the further development of the empirical analysis of teaching, and especially, the teaching of reading. There are inherent possibilities for several unique contributions to the field since this investigation deals with a relatively unexplored area--teacher-pupil

interaction in intra-class reading groups for primary reading instruction. It involves, therefore, three special areas of concern: reading instruction; differential teacher behavior in relation to the perceived ability and/or achievement levels of pupils; and the primary classroom situation. None of these areas has been studied extensively in either the general classroom observation studies on teaching or on the teaching of reading.

This study focuses first upon the analysis of teacher-pupil verbal interaction in terms of its affective dimensions as revealed through the application of a highly generalized technique, Flanders' Interaction Analysis. The study proceeds then to analyze the specific reading content of the same lessons. By integrating the findings of these two analyses, the study should contribute to a better understanding of the relations between the affective and cognitive dimensions of the verbal behavior of both teachers and pupils observed in primary reading lessons, especially when pupils have been identified in groups according to teachers' judgments.

The attempt in this study to examine teacher-pupil verbal behavior under natural classroom conditions created a number of problems in designing and implementing the research. Yet, by focusing upon normal classroom practices in the teaching of reading, this study makes available information about the teaching of reading which could not be acquired under contrived conditions. To that extent, the investigation attempts to pursue the concern of many educators that we need more information about the behavior of teachers under normal classroom conditions if we are to pinpoint effective teaching behavior, especially in the reading class. It is not unlikely that the information generated

in this study, because it is directly related to normal classroom practice, may be more meaningful to teachers than those studies initiated under contrived, even if experimental, conditions.

While this study is essentially non-evaluative, it does reveal insights into the behavior of a select sample of reading teachers at work in regular primary classes and involved in the teaching of reading that may ultimately give direction into the types of behavior that require attention in the analysis of the teaching of reading. Once identified these behaviors may then be explored in depth, in order to determine, eventually, their consequences for the learner. To put it another way, how can we discuss what teaching behavior or act is viable in terms of the accomplishment of our educational goals in reading if we have not first identified the behaviors or acts themselves? This study has attempted to do just that.

Given the identification of specific teacher behaviors, these may then prove useful to teacher educators and those involved in the in-service education of teachers, in helping beginning teachers and practising teachers develop insights into their own teaching behavior. By making explicit certain behaviors we will be in a position to move away from the global behavioral elements that have too long been our "stock in trade" in the education of teachers at many levels.

By focusing upon teaching behavior in reading classes where the pupils are identified according to the teachers' perceptions of their abilities and/or achievements in reading, the findings of this study may be especially relevant. Findings from other studies have indicated that pupils identified as slow learners or under-achievers may benefit less from their classroom experiences than their more competent peers

in the class. This study may reveal some of the factors in the classroom interaction patterns that could account for the difficulties these pupils are experiencing. Moreover, beyond establishing the nature of the verbal behavior in the interaction observed in the different reading groups, these findings, by specifying the nature of those differences will undoubtedly suggest reasons for the apparent failure of intra-class groups to fulfill our expectations for meeting the needs of many pupils.

Given the structure of the basal reading approach, an assumption often made is that the programs operating in the classrooms where the basal reading approach is the method specified by the teacher will be similar. The results of this study may prove valuable in pinpointing how the approach is articulated under the normal conditions of the classroom, and should provide some valuable insights into the reasons why some teachers apparently have more success with a method compared with their colleagues.

The Focused Interaction Episode in Reading, while complex and difficult to use, represents a logical extension of some of the more specific analyses of the content of reading lessons that have been carried out. While questions in reading have been studied, for example, the questions have been either extrapolated from the general context of the lesson, or lessons emphasizing questioning in reading have been set up for the purposes of the research. What is not explored is what is the place of questioning in the normal course of the reading lesson. Whatever may be learned about questioning in reading, if questions are not asked or are seldom asked in some classes the value of the analysis is severely restricted. Questions are just one of many behaviors that

the FIER sets back into the normal course of the lesson.

Lastly, while the Observational System for the Analysis of Primary Reading Lessons that grew from a synthesis of the Flanders and the FIER is not as explicit in identifying the specific content of the reading lesson as the FIER, it takes the FIER one step further in providing an inclusive system that accounts for all the behavior observed in the reading lesson. This observational system, by maximizing upon the simplicity and efficiency of the original Flanders' instrument, while accounting for behavior specific to reading, may be the most significant development of this study. Not only should the system prove of great value to researchers interested in the analysis of the teaching of reading in terms of different research problems, but it may be an observational technique that could be used by teachers in the analysis of their own behavior, or by students learning about the teaching of reading. The need for an observational system specific to the analysis of the teaching of reading must be a major concern of reading educators.

OVERVIEW OF THE STUDY

This report of the descriptive analysis of teacher-pupil verbal interaction in first and third grade reading groups consists of ten chapters. Chapter 1 has introduced the problem and has provided relevant background information, including the assumptions basic to the investigation, the definition of terms, the limitations of the study, and the research questions. In this section an overview of the other chapters is presented.

Chapter 2 introduces the theoretical framework based upon symbolic interaction theory and reviews the related literature. The literature has been selected on the basis of its implications for the methodology of this study, the general insights provided into the analysis of teaching, and the contributions of other researchers to the analysis of the teaching of reading.

Chapter 3 outlines the design of the research, including: the background to the selection of the sample; the data collection procedures; and the preparation of the data for the analyses. Information is also provided about the classrooms involved in the study, including a brief description of the teachers (their background characteristics and attitudes and opinions about basal reading and grouping); the reading groups; and the general characteristics of the reading lessons.

Chapters 4 and 5 focus upon the analysis of the verbal interaction on the basis of the application of Flanders' Interaction Analysis. In Chapter 4 the analytical and interpretative procedures of the Flanders' observational system are briefly described in terms of specific steps taken in applying the system to the analysis of the behavior observed in this study. The findings and conclusions pertaining to the behavior observed in the primary reading groups are presented in Chapter 5.

Chapters 6 and 7 report upon the Focused Interaction Episode in Reading (FIER). Chapter 6 provides a detailed description of the development of the instrument and the procedures followed in using the instrument in this study. Chapter 7 reports selected findings and conclusions supported by the analysis and interpretation of the behavior observed in the primary reading lessons analyzed.

Chapters 8 and 9 deal with the Observational System for the Analy-

sis of Primary Reading Lessons, the instrument that developed from a synthesis of the information about the content of primary reading lessons based upon the application of the FIER, and the Flanders' observational model for collecting and interpreting classroom verbal interaction. Chapter 8 discusses the background to the development of the instrument, indicating the steps taken in developing the category system and the procedures for analyzing and interpreting the verbal behavior in primary reading lessons. Chapter 9 reports the results of a small pilot study to test the efficacy of the instrument in the analysis of primary reading lessons, and to indicate how it might be used to interpret the observed behavior. In testing the instrument, the same data used in the rest of the study have been selected in order to provide a more comprehensive rationale for the interpretation with the revised category system.

Chapter 10 presents a summary of the study, draws together the findings from the different analyses and attempts to synthesize and generalize the major conclusions of the different analyses. The implications of the research for both the teaching of reading and further studies in the analysis of the teaching of reading are also reported.

CHAPTER 2

THEORY AND REVIEW OF THE LITERATURE

OVERVIEW

This chapter will present in some detail the theoretical rationale basic to the identification of the problems examined and the methodological approach taken in this investigation. The theoretical position is discussed not only in terms of its specific relation to this study, but in terms of the contribution it might make to a sociological approach to the study of different facets of teaching and learning reading. General studies of the analysis of teaching which have influenced this study are also reviewed as are a number of studies which have attempted to examine the teaching of reading in situ. The latter have been included in order to point up the paucity of research in reading in the classroom context, and to show that the studies that have been done have tended to treat reading incidentally. That is, the study of teaching, rather than the study of the teaching of reading seemed to be the intention of the investigators and reading was studied only incidentally as one of the curriculum subjects under discussion.

It should be noted that the review of the literature in this chapter is by no means inclusive since a number of studies that have affected the different analyses carried out in the investigation are discussed in later chapters which deal with the specific analytical techniques.

INTRODUCTION

The mainstay of any argument supporting the need for the analysis of teaching under normal classroom conditions is the assumption that there is much to be learned that will lead to improvement of the teaching-learning process. The understanding is that the quality of the interaction between teachers and pupils will influence the learning that goes on in the classroom. While research into classroom interaction is now well underway as indicated by the number and variety of studies referred to later in this chapter, the explication of the theoretical assumptions basic to the analysis of classroom interaction in situ are not always clearly articulated. In trying to comprehend the reason for this situation, one conclusion that may be warranted is that the usual sources for the theoretical assumptions of educational research simply do not translate well in relation to classroom interaction studies. This was undoubtedly the concern of Smith (1967) when he made this statement:

We have been told by philosophers and psychologists since time immemorial that teaching is thus and so, or that it should be so and so. Yet no one, until recently, has taken the trouble to look systematically at teaching as it does on in the classroom to find out what it is, to analyze it and to ascertain its elements and structures and thereby check the validity of the speculations of philosophers and psychologists (p. 63).

In previewing the content of educational studies, the influence of psychology, both in terms of the problems studied and the research methods employed, are clearly indicated. Of perhaps greater importance is that certain schools within the field have predominated. In this context, Mitchell (1970) recently challenged the psychological orientation of educational research, arguing that "trait inventories or other

presumed sources of information about interpsychic states (p. 696)" could not meet the demands of significant contemporary educational or social problems. Commenting on student unrest, for example, Mitchell contended that

the determinants of behavior need to be sought more often in the characteristics of the environmental context and the interaction of these characteristics with individual traits and abilities, and that a search for individual characteristics in vacuo can lead only to partial understanding or no understanding at all (p. 696).

While it would be unjust to downgrade the contributions of psychologically based research to the study of reading, there can be little doubt that the emphasis has been a limiting factor in the kinds of studies carried out. Analyses of what reading involves have held fast to perceptual constructs or models of thinking. Analyses of the characteristics of the reader as learner, with very few exceptions, have concentrated upon the basic psychological areas of perception and cognition as individual psychogenic traits. Reading teachers, when they have been studied, have been examined in terms of such constructs as values, attitudes, and skills as individual traits affecting performance, while the performance per se has essentially gone unexamined. In turn, these studies have influenced the development of reading methods and materials designed for classroom use in that many have at least been publicized as being based upon learning theory and an understanding of the developmental learning characteristics studies.

While there is much support in the professional literature for an interdisciplinary approach to the study of reading, the foundation in psychological theory has tended to result in an interdisciplinary approach involving the related disciplines of neurology, ophthalmology,

psychiatry, and psycholinguistics, each of which has an individual-centered orientation. Surely, a question which needs to be considered is whether reading might also be studied from a social point of view as well as an individual view.

The research reported in this study, both in terms of the questions asked and the methods of analyses employed, reflects a sociological rather than a psychological orientation in that the basic theoretical position is grounded in the socialization assumptions of symbolic interaction theory. As early as 1942, Muller made the suggestion that symbolic interaction theory was relevant to the study of reading, but except for isolated studies, the theory has not had a pronounced influence in the field.

Interaction theory is particularly applicable to the study of reading, if only because one usually learns to read through interacting in some way with someone else. While the nature of the interaction may involve a formal setting as in the case of the classroom teaching situation, some may learn through informal interaction. For example, while few of the parents of early readers interviewed by Durkin (1966) indicated they had taught their children to read, they did report that the children had taken advantage of every opportunity to ask questions about reading and that not only had these questions been answered, but their efforts to read had been encouraged by the family.

Beyond the perceptual task, it could also be argued that reading is an interactive process involving two participants, the reader and the author of the written materials. While we continue to search for a definition of what reading is (Chall, 1967) we might do well to attend more to understanding this interactive element of the reading act.

Socialization theory is particularly relevant to the study of the teaching of reading for teachers in many cultures are formally trained and certified to fulfill the role of socializer, to be the ones responsible for the young acquiring certain knowledge and understandings, (whether skills, values, or attitudes that will ensure their effective entry to the adult roles of the society). The socialization assumptions of symbolic interaction theory specify that the degree to which any child is socialized, in the sense of acquiring these behaviors (and the skills of reading would be included), will reflect the quality of his interaction with those who are responsible for his induction, the significant others in his environment (parents, teachers, peers, etcetera). In other words, at the most general level, symbolic interactionism makes explicit as a basic proposition the idea that the quality of interaction between teachers and pupils will affect that which is learned, and to that extent the theory articulates the basic assumption of the classroom interaction studies being carried out.

In the next section, discussion will center upon socialization theory from the vantage point of symbolic interactionism, and in terms of those specific assumptions that need to be considered in relation to the teaching and learning of reading.

THE THEORETICAL PERSPECTIVE

The term symbolic interactionism has been described by Blumer (1969) as a "somewhat barbaric neologism" coined by him, in an effort to identify a "relatively distinct approach to the study of human group life and conduct (p. 1)." In identifying the theoretical school of

symbolic interactionism, Blumer was concerned about those widely divergent works, sharing ideas about group life which needed to be drawn together in order that there could be a clear formulation of the theoretical position they shared.

According to Blumer, symbolic interactionism depends upon three basic premises:

The first premise is that human beings act toward things on the basis of the meanings that things have for them.... The second premise is that the meaning of such things is derived from or arises out of, the social interaction that one has with one's fellows. The third premise is that these meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he encounters (p. 2).

Blumer argues that all three premises, taken together, must be reflected in any work to qualify as a position in symbolic interaction theory. The three premises are to some extent interrelated, in that to speak of meaning as a determiner of action, the source of meaning must be recognized as arising not out of the natural makeup of an object, nor simply from the meaning attributed to an object within the psychological attributes of the perceiver, but that

The meaning of a thing for a person grows out of the ways in which other persons act toward the person with regard to the thing. Their actions operate to define the thing for the person. Thus, symbolic interactionism sees meanings as social products, as creations that are formed in and through the defining activities of people as they interact (p. 3).

The third premise specifies that the use of a meaning in action involves an interpretative process, where at one level the person indicates the object to himself and thus interacts with himself in selecting, checking, suspending, regrouping, and transforming action as he communicates with himself in the light of the given situation in which he finds himself. "It is necessary to see that meanings play their part

in action through a process of self-selection."

Using the theoretical formulations of George Herbert Mead as the starting point, Blumer then goes on to discuss the basic ideas of symbolic interactionism with regard to the nature of human groups or societies, social interaction, objects, the human being as an actor, human action, and the interconnection of the lines of action. While the ideas generated could be of particular interest to educational researchers concerned with different problems, since this study is concerned with the teaching of reading, only those basic ideas of symbolic interactionism of particular relevance to reading will be considered here.¹

The Socialization Perspective

Mead viewed man as a cooperative animal set off from other species by the fact that his cooperation was not biologically determined but resulted from his unique abilities to act on the basis of intention. Accordingly, he argued that only human volition and not biological determinism would explain behavioral differences in characteristics of different cultures through time and space.

Man alone has the complex mechanisms which allow him to stimulate others independently of stimulating himself or to stimulate himself independently of others. Furthermore, he is able to respond to himself

¹ For the reader who may wish to explore in depth the macro-theory, it is recommended that Mead's original statement in Mind, Self and Society (Mead, 1934) be examined. Blumer (1969) and Rose (1962) have both attempted to articulate the basic premises of the theory. Another source that provides an interesting overview is Symbolic Interaction: A Reader in Social Psychology (Manis and Meltzer, 1967).

as well as to others. In other words, man is not involved in a simple stimulus--response situation. His behavior is distinctly symbolic, for he is capable of interpreting stimuli. He is not simply acted upon.

According to Mead, this process is possible because man is able to develop a self. Man is able to "take the role of the other." That is, he has the ability to project himself outward into the position of the other actor and is thus able to look back at himself from that perspective. In this process he develops a sense of his own uniqueness, his self. Language plays an extremely important role in this process of acquiring a self, for it is through language, gestural and spoken, that men develop a large store of shared meanings that can be used independent of the physical environment. Those symbols that are shared are designated by Mead as "significant symbols" and by internalizing these, man goes through a process of socialization, he develops a sense of independence and is still able to participate in social interaction.

Shibutani (1961), who synthesized theoretical viewpoints and research studies relevant to a symbolic interaction theory of socialization, defined socialization as that process "through which newcomers learn to participate effectively in social groups (p. 473)."

Children are born not simply into physical environments but ones characterized by well-defined symbolic characteristics, and during the metamorphosis from birth through adulthood, the neonate will be expected to learn and to some considerable extent to conform to patterns of behavior which pre-exist his entrance into the culture. As Luria and Yudovich (1959) stated it, one can only understand the mental development of the child by recognizing that he grows up in certain deter-

mined social circumstances that set the conditions which will underlie all his relations with the environment. Conventional meanings or significant symbols which have been referred to by Church (1961) as "shared conceptions of reality" must be acquired. In their acquisition through interaction with others these significant symbols will gradually orient the child to the correct behavior toward the objects around him. The behavior thus learned will be specific to the experiences of the individual and will reflect the kind of behavior directed toward him by those with whom he interacts.

Vygotsky (1962) was also getting at the environmental factors affecting the nature of human development when he spoke of words, the characteristic objects of the symbolic environment, not as referents to a single object, but as referents to a group or class of objects, or generalizations. "Generalization is a verbal act of thought and reflects reality in quite another way than sensation and perception reflect it (p. 11)." The study of the communication process of social interaction, especially where the interaction involves the socialization of the child to the social group could therefore reveal insights into child development.

An emphasis on society, with its particular conception of reality, as the major force in the development of the child should not be translated as cultural determinism per se. For while life style and the world view of the group are important, the behavior demanded of each participant may allow for a wide range of acceptable behaviors. That is, even the most tightly knit groups (not to mention complex societies) usually specify a range of acceptable behavior, and in some cases the range may be very great indeed. For example, a culture may specify a

general language form, such as English, and then allow for a wide range of behavior as indicated by the number of different dialects characteristic of sub-groups in the society. Moreover, many cultural behavior expectations may be specific to certain social roles and will not, therefore, be required of all members of the society. Each individual will have acquired behaviors that relate to all the roles he might play in the society, while others will pertain to only a limited number of the roles he is called upon to fulfill. Finally, some flexibility is provided through the fact that not all meanings are behavioral requisites but indicators of possibilities. That is, in designating an object as a book does not mean it has to be read nor does it mean the book must be used for reading, for while there would be those who may complain, a book could be used to hold open a door. This variability in meanings was reflected in Vygotsky's observation that meanings for both the child and society are evolutionary with the result that meanings do change over time. In terms of reading, one might seriously explore how its social meaning has changed over time.

Symbolic interaction, it should be understood, does not exclude the influence of biogenic and psychogenic factors in behavior; they are simply not incorporated into the theory, except as they are deemed necessary and sufficient for the social-symbolic interaction to take place.

Rose (1962) has suggested that the process of socialization takes place over three stages of development. During the initial stage, learning takes place through a number of psychogenic processes, including trial and error and conditioning. In this sense, the child first becomes "habituated to his environment." He begins to expect certain

behaviors to be directed toward him; yet gradually, as his "habituated" behavior is blocked (such as when the mother does not appear when the infant is hungry) his anticipatory responses suggest that he is able to call up an image of the completed act. These are the images first designated by words and in time by internalizing the symbol for the act, he becomes capable of calling up the image without the presence of physical stimuli.

Once the infant understands the meaning of its gesture (e.g., a cry, a wave of the arm), through a combination of his imagining the completion of his act and of others' defining by their behavior the completion of the act for him, that gesture has become a symbol for him. Socialized others complete the act which the infant's gesture suggests to them, and thus make a meaningful symbol out of the gesture for him (Rose, p. 15).

This meaning is not necessarily static, for while it may remain fixed in meaning and value it may also "take on increments of meaning and value", depending on subsequent experiences.

It is this process which Lewis (1963) seems to be describing in his comments on the child's changing response to Yes and No.

1;9,23. His mother, who is wheeling him in his pram, asks, Want to... walk? He (K) replies, vaukie, vaukie, is put down and walks a little. Later, back in his pram, he says, Vaukie; and when his mother says NO: he tries to get down out of the pram himself (p. 46).

This is clearly a step towards the substitution of words for physical acts--the words are beginning to be freed from the context of the situation in which they have previously been embedded.

Increasing competency in the use of symbols increases the child's opportunities for communication, for he is able to designate to others as well as himself what he has in "mind." As the child acquires symbols, he moves toward almost purely symbolic communication, although he can fall back on the psychogenic processes at any time. What is implicit in this assumption is that learning is accomplished through

symbolic interaction and it is this process which will continue through life.

One very important point about this process of acquiring symbolic communication facility which is especially important to those responsible for socializing the child, is that the child may reach, within the context of his sub-group affiliation, a level of socialization where he simply stops his progress in developing his skills of symbolic communication. In some instances, there may be little more to learn unless the social milieu is changed and new challenges are presented. This comes through very clearly in our society where children are admitted to schools where they encounter those charged with their socialization in terms of certain behaviors which the society suggests the home is not able to handle. (Reading is one of those behaviors.) If learning is recognized as a response to a felt need, then the environment must be conducive to promoting, where necessary, the need for learning. Where, for whatever the reasons, the child has little or no recognition of that need, some impetus must be provided to move the child to learn. Schachtel's (1959) references to "embeddedness" reflect this problem, for as he pointed out, the child can feel so secure in his present situation he may resist moving forward. Luria and Yudovich (1959) were reporting just this type of situation when in their study of twins with retarded speech development, they traced the problem to the environmental conditions which had not called upon the children to recognize "the objective necessity for speech communication." So long as the twins were able to get by, depending upon idiosyncratic communication with each other, their speech failed to develop. Furthermore,

...the observed features of their speech development had led to a peculiar retardation of all the intellectual processes connected with speech, in particular the processes of abstraction and generalization (p. 89).

By separating the twins and placing them in different classes an "objective necessity of speech communication" was established and the measured "cardinal improvements in the structure of the twins' mental life" could only be attributed to the influence of one changed factor--the acquisition of language.

Problems are created by the fact that when a society is characterized by a number of sub-cultural groups having, as it were, its own "meanings", children are expected not only to master the behaviors of their sub-group but the general society as well. The usual assumption is that the sub-groups correspond well with the general order, and that children naturally operate in both and subsequently acquire the behaviors of both. Lately, however, we have considerable evidence that this is not always true, and where there has been a breakdown, real problems are created for the young who must, at a point in time, operate in the general culture, quite unprepared to do so. That is, where there is a major difference between the sub-culture and the general culture the child may actually learn behaviors which are in opposition to those generally valued or he may simply not acquire those he does need. Language differences alone can create difficulties as witnessed by the findings of Bernstein's (1965) analysis of the differences in linguistic behavior across different socio-economic groups. Or, consider the findings of Hess and Shipman (1965) who reported linguistic differences among children of different sub-cultural groups and traced these differences to the communication patterns of the parent-child

relationship. Of objective necessity, the communication patterns of teacher-solicalizers must also be subjected to examination.

Like psychoanalytic theory, symbolic interaction theory proposes that man never forgets anything. This is not to suggest that there is an ad hoc retention of all old behavior patterns, but an "integration" of newly acquired meanings and values with existing ones. Behavior undergoes a continuing modification with experience:

In this integrative sense, a man's behavior is a product of his life history, of all his life history, of all his experience, both social and individual, both direct and vicarious through communication with others (Rose, p. 17).

These characteristics of "symbolic learning", (integrated, cumulative, and evaluative) represent one of the unique characteristics of symbolic interactionism, for the theory pays more than lip service to the complexity of the relationship between experience and behavior. Despite our greatest electronic achievements to date, we have yet to invent a machine which can behave symbolically in the same sense as man does. While it is not inconceivable that such a machine is theoretically possible, symbolic interactionists would contend that we are not so close as the behaviorists would lead us to believe.

The understanding that something once learned is never completely forgotten must be given serious consideration in the study of child development. For example, assuming that the self-concept has an important "meaning" for man's behavior, a conception of self, once learned, will affect an individual's behavior for life.

The psychogenic habit may be broken, but the self-conception is never forgotten, and the ensuing behavior is an outcome of a struggle between an old self-conception and newer ones (Rose, 1962, p. 18).

The self-concept is derived from the child's assuming the role

of others and then looking back in on himself. Obviously, what he sees will be dependent upon the perception of himself that he first "sees" in others. Cooley (1967) hypothesized the "looking glass self" and more recently Rosenthal and Jacobson (1968) have looked at the "self-fulfilling prophecy" as related to the classroom situation. Each was concerned with the effects that others' expectations have on behavior. Cooley concluded that people often behave or at least try to behave in a manner congruent with the expectations of significant others, and the Rosenthal and Jacobson study has offered some interesting evidence that teachers' perceptions of pupils were reflected in pupil performance, even to the extent of affecting intelligence scores. While it was ethically impossible in the Rosenthal and Jacobson study to test for the effects of negative expectations, there is no reason to believe that the opposite would not be true in view of the voluminous literature pertaining to the retarded personal, social, and intellectual development of rejected children. What is important is that early experiences, especially the negative ones, may have a deleterious effect on future behavior to some extent at least. If the child developed a poor self-concept as a result of his early experiences, we might expect that however the concept was changed over time, there might still be instances when the old ideas of self would predominate.

The discussion thus far has concentrated mainly upon the general aspects of symbolic interactionism and the socialization process. The question pertinent to this study is what does the theory have to add to the study of reading. The contention here is that the theory opens up a number of perspectives within which reading can be examined. Indeed, it could be argued that assuming the role requirements of

reader constitutes one of the single most important tasks facing the child of the literate society, and that consequently, the very identification of those requirements is one of the tasks of the reading researcher.

Reading also represents one of the most abstract of the symbolic interaction tasks performed by man. Reading, a form of communication involving one individual with another, is uniquely set apart from the usual forms of interaction because one of the participants, the author, cannot be overtly influenced by the other participant, the reader, except by way of the reader allowing his intentions to distort those of the author.

While these are interesting speculations to which one could add many dimensions, the real concern here is with the implications of symbolic interaction theory for the teaching-learning or socialization process through which children acquire the role requirements necessary to the act of reading. The previous assumptions and discussion support the position that if we are to understand and facilitate the child in his acquisition of skill in reading, we must be prepared to observe what goes on when the socializer engages in the task we identify as "teaching the child to read."

Surprisingly, while many attempts have been made to influence that process through external controls as indicated by the ad hoc adoption of some one method for "teaching the child to read" there is little in the research to suggest that the teaching-learning situation itself (the social interaction through which the assumptions of the so-called methodology materialize) has been subjected to careful examination.

The need to examine this interaction process is articulated in the assumptions of symbolic interactionism, especially the assumption that the quality of the interaction will affect what is learned. Moreover, since the interaction necessary for teaching the child to read is very close to a universal in this society, that interaction must be considered in the light of its meaning for the child as he develops his own image of himself as a learner and a person (his self-concept). It is not impossible that what happens during the teaching of reading may have far reaching implications not just for the kinds of readers our schools produce, but for the kinds of people produced as well. When we study classroom interaction during the teaching of reading, attention must be directed to both the affective and the cognitive components of the interaction, for forces that have a negative impact upon the learner's desire to learn may have an adverse effect on our purposes to be achieved. Pupils must have a recognized desire to learn to read if they are to expend the effort necessary for learning to read. Similarly, we must expect that reading may not be valued by the child who comes to school from an experiential background in which reading has had little or no purpose, and that such a child may not expend effort on reading. Should the teacher operate on the assumption that everyone accepts without question the value of reading, then there may be a failure to make clear the "objective necessity of reading" and this may affect the degree of correspondence between teacher and pupil in the learning to read class. Recognizing the possibility of disinterest should help to enlighten our approach to teaching some children to read. It may be that the perceptual task might be postponed, for example, in favor of setting the conditions for a desire to learn

to read.

Children come to the reading class from different experiential backgrounds, often with the result that the behaviors required for effective participation in the school environment may not have been learned. To what extent do our classrooms account for this possibility? Assuming there is a breakdown, how do teachers react? At another level, how should they react? Until we know the kinds of behavior generally found, can we hope to offer prescriptive advice on what else may be accomplished? How are such differences identified--on the basis of some readiness or intelligence score--and how valid are such measures for providing us with the insights needed to take the role of the child in the teaching-learning situation?

That we are conscious of the differences in learners in the reading class is evidenced by the number of steps taken to account for those differences. The establishment of ability and/or achievement groups either within one classroom or across classrooms would be one example. Yet, these practices raise a number of questions. In terms of intra-classroom reading groups, one assumption is that such groups allow for an increase in the amount of face-to-face interaction. Is this, however, true? In this writer's experience, in many classes, the grouping procedures actually reduce interaction among group members since the proximity of the teacher to the group allows for greater control. While the smaller group may increase opportunities for the pupil to interact with the teacher, such interaction remains unexamined, although the logical question would be whether or not an increase in interaction is as efficacious as we believe. If the interaction is in fact increased then there is a need to determine both the positive and

negative aspects of that increase.

Learning to read is important to the child in terms of the evaluation made of him in the school situation, not just by teachers but by his peers as well. For example, Jackson (1968), in discussing the praise component characterizing life in classrooms pointed out that the teacher is not the only one who passes judgment in the learning situation but that classmates frequently join in the act. If the personal qualities of the student are involved in his learning to read, we may anticipate that those qualities themselves will be open to evaluation in the classroom. Jackson has observed that:

Evaluation that focuses on a student's personal qualities is as likely to come from his classmates as from anyone else. The student's classroom behavior contributes in large measure to the reputation he develops among his peers for being smart or dumb, a sissy or a bully, teacher's pet or a regular guy, a cheater or a good sport (1968, p. 22).

Added to this, Edwards (1962) cited a study by Preston which reported that 78 percent of the teachers he studied could not refrain from expressing their annoyance at slow, stumbling failures and that such factors should be considered in determining the causes of reading failures. In commenting upon the study, Edwards noted that

...the slow, stumbling reading rate is a definite stage in learning word attack skills. Yet we can see evidence that both teachers and children can develop an intolerance of this essential process. The perceived need on the part of the teacher to get children to "read" and the perceived need on the part of children to be "good" readers, for social reasons, can have a deleterious effect on the progress certain children make in learning to read (p. 52).

There can be no question that in view of the perceptions held of the poor reader as expressed in the behavior toward him, that the poor reader in taking the roles of others may look back upon himself in a disparaging way, and that in turn belief in what he sees may further

compound his difficulties. That is, the child may perceive himself as quite incapable of handling the reading task and may in turn lack the drive and initiative to try out whatever abilities he does have.

Surely, in view of the role of reading in the elementary school, the question of the kind of behavior directed toward the poor reader, as compared with the more able reader, is in need of considerable study. It should be added that the present investigation attempts to look specifically at this question.

THE STUDY OF CLASSROOM INTERACTION

One of the most formidable difficulties confronting those interested in classroom research revolves around the methodological issue. In terms of symbolic interaction theory, Mead has been criticized largely for his failure to account for a methodology through which his ideas could be tested empirically. Indeed, much of what has gone on in symbolic interactionism has revolved around issues relating to just that problem.

Research methods have developed over the years and the nature of the methodological approach of symbolic interactionism has been set out by Blumer (1967) in the following statement:

Symbolic interaction is a down-to-earth approach to the scientific study of human group life and human conduct. Its empirical world is the natural world of such group life and conduct. It grounds its problems in this natural world, conducts its studies in it, and derives its interpretations from such naturalistic studies.... Its methodological stance, accordingly, is that of direct examination of the empirical social world... (p. 47).

No doubt some would argue against this type of research. Blumer's response to that argument would be that too much of what passes for

scientific study in the social sciences has depended upon the attempt to reduce human group life to variables, which have not themselves been critically examined. In commenting upon "variable analysis" he made the points that:

There seems to be little limit to what may be chosen or designated as a variable. One may select something as simple as a sex distribution or as complex as depression; something as specific as a birth rate or as vague as social cohesion; (1967, p. 84).

...there is conspicuous absence of rules, guides, limitations and prohibitions to govern the choice of variables (1967, pp. 84-85).

...in short, there is a great deal of laxity in choosing variables (1967, p. 85).

While there is some variation among symbolic interactionists in their attitude toward the level of sophistication required of research designs, many symbolic interactionists support the view that the success of the discipline will depend upon the gathering and interpreting of relevant data by whatever means are available and appropriate. Becker and Geer (1967), for example, make the comment that participant observation and interview provide the most complete form of data.

By participant observation we mean that method in which the observer participates in the daily life of the people under study, either openly in the role of researcher or covertly in some disguised role, observing things that happen, listening to what is said, and questioning people, over some length of time (Becker and Geer, 1967, p. 109).

While the method, at least as a covert activity, does not lend itself to the study of the classroom, the implication is there that much is to be learned about behavior through observation and description. One of the closest approximations to this approach in terms of the study of the classroom was followed by Smith and Geoffrey (1968) where Smith observed in Geoffrey's classroom for an extended period of

time, deriving masses of data from which he attempted to articulate certain hypotheses about the classroom behavior of the major participants, the teacher and the pupils. Smith, however, did not participate in the classroom; in fact, he carefully avoided participation as much as possible. Yet, his published study offers some valuable insights into the educational process, as these were articulated in the practices of one classroom.

Time, money, and the unique characteristics of the school classroom would indicate that other methods for describing and understanding the teaching-learning process under the natural conditions of the classroom are in order, although observation would remain as the key to the approach to be followed.

For those who would doubt the efficacy of observation studies, consider the implications of Jackson's (1968) observation that:

...we must keep in mind the ubiquity of classroom phenomena in both time and space. Only as we remember that each classroom minute is one of millions of similar minutes experienced by millions of persons and by each person millions of times, are we led to look closely at the details of the events before us. Considered singly many aspects of classroom life look trivial. And, in a sense, they are. It is only when their cumulative occurrence is considered that the realization of their full importance begins to emerge. Thus, in addition to looking at the dominant features of instructional interchanges and the overall design of the curriculum we must not fail to ponder, as we watch, the significance of things that come and go in a twinkling--things like a student's yawn or a teacher's frown. Such transitory events may contain more information about classroom life than might appear at first glance (p. 177).

General Studies of Classroom Interaction

Studies of teacher-pupil interaction in the natural classroom setting have been appearing with increasing regularity in the educational literature. While many studies are subsumed under the rubric of

research in teacher effectiveness, many of the reports deal with the empirical analysis of teaching behavior. The basic assumption is that to understand the teaching process and to devise better forms of instructional behavior, one can and should begin with the study of ongoing teacher behavior.

Historically, classroom observation has played a significant role in educational research aimed at the improvement of instruction. However, there has been a significant shift in the orientation of the observations made. Instead of making evaluative statements that smack of assessment, studies have appeared which begin to meet requirements set forth by Medley and Mitzel:

Direct observation should play a crucial part in the most fundamental kind of research on teaching--the search for effective patterns of classroom behavior--the type of research most worthy of the name methods research (1963, p. 249).

Flanders and Simon (1969), commenting on teacher effectiveness studies in the most recent edition of the Encyclopedia of Educational Research, stated that while cautious optimism is necessary, there is an indication that "the tools long needed for the analysis of the teaching-learning process are gradually being developed (p. 1423)." The tools to which he refers are those that move from

subjective evaluations to a more objective counting of teacher-pupil interactions, using more sophisticated observation systems, and handling the larger quantities of data by taking full advantage of computer capability (p. 1423).

The development and refinement of these observational techniques have taken up much of the energy expended in this area. Some of the observational schedules that have resulted are being used with some regularity, but often, even these are modified. The present study straddled both fences in the sense that the original form of the Flanders

Interaction Analysis was used while an attempt was made to develop a new content analysis schedule especially suitable for studying teacher-pupil interaction during early reading instruction. Consideration was given to using a modified form of the Flanders analysis (Amidon and Hunter, 1967; Hough, 1967), but this idea was rejected in order that the findings of this study could be related to the larger body of data that has developed around the Flanders technique. On the other hand, while the Flanders analysis was used intact, categories of behavior within the Flanders' categories were identified and recorded. Having completed these different analyses and the related interpretations, the different systems were synthesized in such a way that a new instrument which is intended to combine the best attributes of both systems was devised. It is not impossible that this system may be recognized as a major contribution of this study.

Amidon and Simon (1965), in reviewing classroom interaction studies, concluded that the systems of analysis could be classified on the basis of the intentions of the authors as cognitive, affective, and multidimensional. Those classificatory systems developed to get at teacher-pupil interaction in terms of the socioemotional dimensions of the interaction were included in the affective category. Examples would include the studies of Anderson (1939--reprinted in Amidon and Hough, 1967) and those of Flanders (1965). Those studies primarily concerned with intellectual activity in the classroom were designated as "cognitive systems" and would include the work of Aschner (1963), Bellack, Kliebard, Hyman and Smith (1966), Nuthall and Lawrence (1965), Smith and others (1964), and Taba (1964). Among the multidimensional systems mentioned by Amidon and Simon (1965) was the Observation Sche-

dule and Record (OScAR) developed by Medley and Mitzel. OScAR is a "comprehensive system for cataloging teacher-pupil interaction, class structure, and classroom activities and materials (Amidon and Simon, 1965, p. 131)."

The present study used the Flanders analysis system in order to examine the affective nature of teacher-pupil interaction during reading instruction, as has been noted. However, the content analysis proposed in this study stems in part from Smith's (1962) observation that while studies of the affective--social emotional aspects of the teaching situation are important, they are certainly no more important than the cognitive. Within this context, he states that "we should begin to look more closely at what goes on at the point of actual instruction (p. 326)." Of even greater significance to the present study is his comment:

One wonders if the teaching operations as they go on from moment to moment--those operations involved in handling the subject-matter rather than the student--yes, one wonders if these are not often basic factors shaping the students' perceptions of the teacher and teaching in general (p. 326).

The content analysis system developed for this study owes much to those researchers concerned with the cognitive aspects of teacher-pupil interaction, and, in particular to the work of Bellack and others (1965), as will be seen in the development of the system presented in Chapter 6.

Studies that deal in specified ways with the analysis of classroom interaction have appeared with increasing regularity in the literature. Most are exploratory and relatively complex; however they have been well reviewed and integrated in a number of excellent sources including Biddle, 1967; Flanders, 1969; Kliebard, 1966; Medley and

Mitzel, 1963; and Withall and Lewis, 1963. Biddle's review was especially valuable since it was both critical and comprehensive.

While empirical studies of classroom interaction have been carried out at almost every grade level there have been very few at the primary level. With few exceptions, (Braun, Holzman and Lasher, 1969; Cooper and Thomson, 1967), primary classes are included usually as part of a larger study (Guszk, 1967; Waimon, 1962). While all curriculum areas have been examined most work has been done in classrooms focused on the discussion situation (Aschner and others, 1964; Bellack and others, 1965; Slinn, 1969). This study looked at formal lessons in the teaching of the basic skills of reading.

Pfeiffer (1967) carried out a Flanders analysis of classroom interaction patterns during English classes in which the students had been grouped on the basis of their abilities. What Pfeiffer sought to determine was whether or not the assumption that teachers would modify their behavior according to the ability levels of the students held true. What she found was that the teachers did not differentiate their patterns of teacher-pupil verbal interaction in classes of different levels of ability. There were some differences, however, in the percentage of behavior falling in specific categories. Pfeiffer looked at interaction patterns with different ability classes, separated from each other, whereas in the present study, the different ability groups were in the same classroom and teachers would have been fully cognizant of the differential performance of high, average, and low groups. As the teacher moved from group to group, she would be conscious of the performance of the other reading groups and this might be expected to influence her expectations and subsequently her behavior toward the

group.

In Waimon's (1962) study the descriptive data collected during periods of classroom observation were divided into smaller units which were called behavior episodes. "Behavior episodes may best be explained as samples of behavior, within the larger stream of behavior, which have a discernible beginning and end (p. 355)." The idea of the episode was basic to the unit of behavior identified for the content analysis of reading behavior in this investigation. The Focused Interaction Episode in Reading differed most from the Flanders in that it did not look at the ongoing stream of behavior. Instead, attention was directed at a behavioral episode within which the nature of the teacher's solicitation, the pupil's response, and the teacher's reaction were specifically described in terms of their content relevant to the teaching of reading.

Zahorik's (1968) analysis of the feedback behavior of teachers during discussion periods indicated that the number of feedback behaviors identified in the FIER would have to be fairly extensive if all of the observed behaviors were to be described. Zahorik found that the teachers in his study exhibited a variety of different feedback behaviors (175 by fifteen teachers) but only a comparatively few were used with regularity. This pointed up, too, the need to identify a category simply titled 'other' in order that the idiosyncratic patterns of some teachers could be examined. Zahorik's list of behaviors also influenced to some extent the different behaviors identified in the initial FIER instrument.

Empirical Investigations of Classroom Interaction in Reading

Several studies in reading have made elementary use of observational systems for recording teacher-pupil verbal interaction in reading lessons. Some have used standard procedures, such as the Flanders analysis, while others have used a system especially devised for the analysis of reading instruction. In selecting the studies commented upon in this review, only those investigations which have focused upon the analysis of the teaching of reading per se are referred to. Studies of the analysis of teaching of other areas of the curriculum which deal only indirectly with reading have not been included.

Most studies attempting to analyze various aspects of the teaching of reading have been exploratory, but they do provide interesting insights and point up the need for more research in this area.

Furst and Amidon (1967) included reading lessons among the areas they studied with Flanders' Interaction Analysis in grades one through six. In reporting the results of the investigation, the points made were related more to grade level than subject area, and where the results for reading lessons were cited, attention was given more to the upper grades than the primary grades. Furst and Amidon did raise an interesting question about the teaching of reading when they asked:

How much do the teacher manuals and teacher editions of textbooks, especially in reading, influence the teacher's approach to the teaching process and is this influence reflected in her verbal behavior (p. 175)?

In this study, each of the teachers indicated that she taught reading by the basal reading method and therefore each would have had guidebooks available. To some extent, this study could contribute to our finding an answer to the above question.

Silberman (1958) reported a study involving classroom observations of teachers' verbal behaviors and their relationship to pupil growth in reading, with specific attention to the analysis of the effects of praise and reproof on reading growth. Observers visited the classrooms of forty-nine first year teachers and categorized teacher behavior on the basis of a specially devised observation schedule designed to provide information about "expressive behaviors" and subject-matter emphasis (p. 200). Observations were not confined to teachers' behavior during reading lessons, but included a number of different subject matter areas. Statistical analysis of the relationship between praise and reproof and reading growth did not reveal a significant relationship. What is not emphasized in the study, but what may be more important, is the effect of praise and reproof during the earlier period of reading instruction when many pupils are more directly dependent upon the teacher for instruction in reading. Since Silberman's study dealt with children at the grade three level and above, praise and reproof as measured, may not have had a significant effect on reading growth because it may have been too late for a generalized effect of this nature.

Soar's (1967) study examined the growth of reading and vocabulary in terms of "...the degree of control exercised by the teacher, and the degree of warmth or supportiveness of the emotional climate (p. 245)." On the basis of observation analysis in a number of classrooms, four classrooms were selected as representing the extreme combination of conditions: direct control, high hostility; direct control, low hostility; indirect control, high hostility; indirect control, low hostility. It was hypothesized that both reading comprehension and vocabulary would

improve under conditions of indirect control, low hostility. The hypothesis was upheld in the case of vocabulary but the results for reading comprehension were not consistent. In trying to reconcile the findings, Soar first suggested that reading as measured on the Iowa Achievement Test was less abstract than the vocabulary tested, and was thus facilitated by more stressful (high hostility) conditions. Secondly, he suggested that since vocabulary was not taught directly in the classes visited, it was in a sense more dependent upon "inner directed learning" and that this kind of learning might be more easily influenced by the climate and control characteristics of the classroom.

Morrison (1968) studied teacher-pupil interaction under three different instructional conditions for teaching reading: single text-large group; multilevel texts-different ability groups; and a supplementary form of individualized instruction. A revised form of OScAR was used for the analysis of video-taped samples of behavior in elementary reading classes. The results showed that on this one dimension, the multilevel and supplementary reading classes were significantly higher in terms of positive affective behaviors. A point not explored by Morrison, but one that deserves to be considered is whether or not "warmer" teachers tend to choose procedures that are more likely to meet the needs of a wider range of children. Then, a question was raised as to whether the "warmth" that comes through in the analysis of total classroom behavior extends to all the children in the class regardless of their ability?

Bogener (1968) used Flanders' Interaction Analysis to examine teacher-pupil interaction under different methods for teaching beginning reading. Seven teachers, each using one of seven methods of inst-

struction (for example, i.t.a.; programmed instruction; language experience) constituted the study sample. Each teacher was considered to be very proficient in the use of the particular method and was in fact demonstrating its use at the time of the observations. A number of findings are reported, including, for example, that the most direct teacher behavior was in the programmed approach, while the most indirect behavior was in the language experience approach. Once again, however, no effort was made to determine whether teachers behaved in the same way with children at different ability levels. Since there were no data on different teachers using the same method, there was no information on teacher differences within a method. The conclusion that the method was the independent variable affecting teacher behavior must therefore be viewed very cautiously.

Only one interaction study is included in the proceedings of the 1968 IRA convention in Boston. Haffner and Slobodian (1969), using the Reading Observation Record (ROR) which had been developed earlier by Slobodian for studying teacher-pupil interaction in reading, tested the null hypothesis that "...teacher-pupil interaction patterns do not vary significantly when a basal reading approach is used in reading instruction (p. 764)." The subjects for the study were high ability groups working on the Ginn reading readiness program. The ROR provides five categories for describing teacher-pupil behavior. Profiles for each teacher in the study were prepared and then compared. Two findings were statistically significant. On both occasions that the teachers were observed, the predominant behavior was "pattern 3" which the authors describe as teacher initiated question followed by pupil response. Thus, the authors imply that when measured by the ROR read-

ing teachers rely heavily on question-answer interaction behavior. But, since the ROR is made up of only five categories, relevant behavior could have been lost, thus reducing the possibilities for differentiating among the teachers studied. The finding itself is not surprising since the question-response cycle shows up significantly in most studies of teacher-pupil interaction and for that reason has become a unit subjected to more intensive analysis.

Guszak's (1967) study of the strategies of teachers during reading instruction is an example of the kind of analysis that can be done. Proceeding on the assumption that prescriptions about what should happen in the classroom should be based in part upon what is happening, Guszak collected and analyzed samples of the kinds of questions asked during reading lessons on the basis of a set of categories based upon the Bloom taxonomy. The findings suggested that despite the carefully planned questioning set forth in basal series manuals, "it was not readily possible to determine to what extent, if any, the teachers planned their guided reading questions (p. 111)." On the basis of the data, Guszak concluded that teachers tended: (1) to emphasize recall thinking about reading; (2) to utilize several controlling actions to cue, clarify, extend, or shut-off pupils' thinking or answering; and (3) to miss many opportunities for putting questions together into clusters that would extend thinking (p. 116). In view of the emphasis on questioning as an instructional technique, this finding is important and should be explored further. Guszak's study is particularly relevant to the present investigation since his "Reading comprehension question-response inventory" is included in the content analysis proposed for this study. (For a complete description of the inventory,

see Appendix B). The categories have been included as part of the FIER analysis in order that some of the findings of this study may be related to those of Guszak, thus contributing to a growing integrated body of knowledge about the teaching-learning process in reading.

Bartholome (1969) has also carried out an in-depth analysis of teachers' questioning strategies during reading instruction. However, his work has been criticized by Clegg (1970) who argued that Bartholome misused the analysis category. Despite that problem, the Bartholome categories might be more relevant to a study aimed specifically at the comprehension aspects of reading lessons.

Errors in Reading

The content analysis system developed for this study attempts to look at the specific kinds of errors children make in reading and teacher reactions to those errors. The attention to errors follows upon the observation of Clinchy and Rosenthal (1966) who argued that errors provide an invaluable source of information about the child with the concomitant benefit that the observed data are grounded in the immediacy of the situation. They make the point that a focus on children's failures rather than successes stems from the simple fact that errors are more informative than right answers. They argue that commitment to an analysis of errors "entails a commitment to teaching methods in which the emphasis is shifted from correct answers to the processes by which the children arrived at these answers (p. 51)." The present study offered an opportunity for the systematic analysis of the kinds of reading errors children make during the teaching of reading and attempts to indicate just how teachers react to, or in other words, use

those errors in guiding the child to becoming a better reader.

One investigator in reading who has concentrated upon the analysis of children's oral reading miscues is Goodman (1969). While Goodman did not examine these oral reading errors under normal classroom reading conditions, his work has influenced the development of the content analysis system in terms of the kinds of errors or miscues identified in the analysis.

SUMMARY

In this chapter, the theoretical assumptions basic to the problem examined in this study and the methodology employed have been explicitly set forth. Studies in socialization processes which reflect the theory have been examined, and a number of studies of classroom interaction patterns have been referred to. Similarly, several studies which have attempted to examine classroom teaching in reading were also examined if only to show up how limited the research in this field has been.

CHAPTER 3

THE DESIGN OF THE RESEARCH

INTRODUCTION

In order to accomplish the purposes of this study, raw data were collected in the field under natural classroom conditions for the teaching of reading and subsequently subjected to analyses in the laboratory situation. In all classes the teachers controlled the selection of the lesson materials or focus of the lesson; the assignment of pupils to their respective groups; whether they would meet each of the reading groups during the lesson; and the length of the lesson.

The data consisted of observational records, audio-recordings of teacher-pupil verbal interaction, and information gleaned through informal discussion and structured interviews with the teachers involved. In this chapter the steps taken in the selection of classrooms, the collection of the data, and the preparation of the data for analysis are described. The teachers, pupils, and the nature of the observed lessons are also described in this section. However, the analytical schemes used for the description and analysis of the observed interaction are reserved for subsequent chapters, in order that the details of each system may be explained in juxtaposition to the findings and conclusions of the analysis. This is a necessary step for each of the analyses is complex in design and application and requires considerable explanation.

SELECTION OF THE CLASSROOMS

Two criteria were established for the selection of the grade one and grade three classrooms observed in this study. First, the classroom would be included only if the teacher specified that she used a basal reading approach to the teaching of reading. Second, only classrooms where pupils were grouped for reading on the basis of the teacher's perceptions of the pupils' abilities and/or achievements in reading into three groups identified as high, average and low would be included. More importantly, teachers' positive responses to these two questions about their reading programs and organizational practices were accepted at face value. That is, if the teacher described her reading program as a basal reading approach and stated that she had three reading groups in her class, then this was accepted as prima facie evidence that the class met the requirements of the study.

The Faculty of Education (University of Alberta) regulations require that the Office of Field Experiences handle requests for research projects in Edmonton schools. Therefore, in two cases the requests had to be submitted through that office to the research representatives of the local school authorities. The investigator made personal contacts with representatives of three other authorities. In all instances, the school board representatives reserved the right to suggest the teachers that could be approached by the investigator. In the final selection, three school boards recommended several teachers each, while two were unable to do so because the basal reading approach was being phased out in their systems that year.

Once the teachers had been recommended, each was contacted by

telephone and an attempt was made to determine whether the teacher did use a basal reading method and had three reading groups in her self-contained classroom. Several teachers were deleted from the sample following this initial interview since discussion revealed that either their program or their organizational practices deviated from those set for the study. Eventually, however, five grade one teachers and five grade three teachers who seemed to meet the requirements were contacted and personal interviews were arranged.

During the interview, the general purpose of the study--the analysis of classroom interaction during reading lessons--was explained; the data collection procedures were described; and an attempt was made to interest the teachers in the study and to persuade them to cooperate. On the whole, very little persuasion was necessary since the teachers agreed with the need for studies of the teaching of reading and were most willing to participate. School board authorities also expressed keen interest in the study and offered considerable assistance to the investigator.

Throughout the study, concern for protecting the anonymity of teachers who would be involved in the study was uppermost in the mind of the investigator. It was this concern that led the investigator to approach several school boards rather than one, in the search for classrooms to observe, since this would ensure that, barring collusion among the school boards (an unlikely prospect), the names of all ten teachers would be known only to the investigator. What was interesting is that the teachers were less disturbed about their anonymity than was the investigator. However, in anticipating that some teachers might be persuaded to cooperate if their identities were well pro-

tected, the anonymity factor was stressed at all times.

It is acknowledged that these selection procedures were biased not only because the teachers were first recommended by their boards, but because they so willingly agreed to participate in the study. However, with so small a sample and the need to arrange for classroom visits through local authorities, random sampling procedures were simply not possible. The basic assumption which prompted the continuation of the proposed study was that there was much to be learned about teacher-pupil interaction during the teaching of reading, even if the teachers observed might differ in undefined ways from their colleagues. Once the ten teachers agreed to participate, therefore, the observation schedule was set in motion.

OVERVIEW OF THE OBSERVATION SCHEDULE

The classroom visits were carried out over ten weeks during January through March, 1970. The five grade one classes were observed over the first five consecutive weeks, and the five grade three classes were observed during the final five weeks. One week was allocated for each of the ten classes and data were collected during the morning reading period as designated by the classroom teacher. The original intention to visit each class for five consecutive morning observations could not be followed since that schedule allowed for no contingencies which might interfere with the normal operation of the reading class (including sub-zero temperatures). Finally, at least four visits were made to each class for the purpose of observing and collecting data. The decision to limit the number of visits to four proved

warranted since regularly scheduled classes were interrupted twice and the recording equipment failed twice.

During the week prior to the observation and data collection visits, the investigator observed in the classrooms for two afternoons, usually the preceding Thursday and Friday. These visits served as orientation sessions for the investigator and provided an opportunity for the teacher and pupils to become accustomed to the presence of both the observer and the equipment required to record verbal behavior. The investigator used the opportunity to learn about the pupils and to become familiar with the physical arrangements of the classroom. Polaroid photographs of the different reading groups were taken and the children were identified by name. The photos were useful aids to the investigator in learning the names of children in different reading groups prior to the formal observation sessions. It was anticipated that if the investigator knew the names of pupils in the class, this would prove useful in keeping the anecdotal records and would make them more meaningful to the later interpretation of the data.

The preliminary visits also made it possible for modifications in the recording equipment to be settled in order to insure clarity in the audio-recording of teacher-pupil verbal behavior. During these preliminary visits the investigator moved about more than would be required during the formal data collection observations in order to impress her presence within the classroom. Since the observer rarely moved about during the data collection sessions it was hoped that on those occasions the investigator would be less noticeable. During these orientation sessions pupils were allowed to examine the recording equipment and to satisfy partly their curiosity. Furthermore,

teachers had an opportunity to teach in the presence of both the equipment and the observer and to become accustomed to some extent to the newness of the situation.

The afternoon preliminary visits created some problems because reading lessons were seldom taught at that time. However, as the investigator was involved in another class most mornings, the problem could not be resolved.

None of the classes observed was in the same school, for while this may have facilitated the observation schedule, it was believed that any anxiety prompted by the teachers being concerned that they were being compared would have far outweighed the organizational advantages.

COLLECTION OF THE DATA

The raw data for this study consisted of audio-recordings of teacher-pupil verbal interaction; anecdotal records of classroom events during the reading period; and details about the teachers, the pupils, and the reading lessons based upon information solicited through informal and formal discussions with the teachers. As noted previously, polaroid photographs of the pupils were also available to complement the written records.

Verbatim Audio-Records of Teacher-Pupil Verbal Interaction

In order to secure a verbatim record of the verbal interaction behavior of the teacher and pupils during the teaching of reading,

audio-tape recordings were prepared during each observation.¹ In order to disrupt classes as little as possible, the Sony TC 110 cassette tape recorder was used for recording the verbal behavior. The Sony TC 110 is a small (9 inches by 5 inches), battery operated tape recorder encased in a black leather jacket with a built-in microphone system. As such, the 110 was unobtrusive, mobile, and sensitive enough to pick up the verbal behavior of both teachers and pupils. The recorder looks very much like a small black box and there were no moveable parts that might prove distracting. In the event that the TC 110 would prove inappropriate under some conditions, a Telefunken Megnetaphon 300 taperecorder was available at all times as a back-up system. In practice, the Telefunken was used only once and the results were not significantly superior to the Sony.

Two Sony recorders were used during each observation. One recorder was positioned to secure the clearest recording of the teacher's verbal behavior and as much of the pupils' verbal behavior as possible. The other recorder was positioned to pick up the verbal behavior of pupils some distance from the teacher and the teacher's voice if she moved about the group. In most instances both recorders provided excellent recordings. In practice, the second recorder really served the purpose of providing a back-up system in the event of mechanical failure. One recorder did fail twice during the observations and there

¹ All audio-equipment, with the exception of the Telefunken recorder were made available to the investigator through the resources of the Audio-Visual Media Center (AVMC), Faculty of Education, University of Alberta. The writer is deeply indebted to the technical staff who were so helpful whenever problems were encountered during the course of the study.

were several occasions when partial data would have been lost had the second recorder not been set up.

There were difficulties in recording the verbal behavior in only one class. Part of the problem could be attributed to weaknesses in the equipment at longer ranges, but more specifically to the organization of the observed class. The problem was that the teacher did not meet the reading group as a group, but tended instead to work with individual pupils as they completed the assigned tasks for their group. The problems in collecting an adequate record of the verbal behavior for the analyses proposed for this study eventually led to the deletion of the class from the sample. (The specific difficulties in this class will be discussed in greater detail later in the section on the teacher sample.)

When a teacher moved from one group to a short-term interaction with another group it was impossible to follow her with the equipment without disrupting the class. Therefore, these brief encounters were seldom recorded and are therefore not part of the verbal behavior analyzed. In most cases, the teacher would tend to speak with one child independent of the group situation and so the loss of the data was not crucial, since the intention was to record and analyze verbal behavior in the group context.

On the whole, considering its size, the audio-recording equipment worked well and produced adequate recordings of teacher-pupil verbal interaction which were then used for all subsequent analyses.

Rank Order of Pupils According to the Teacher's Judgment of Their Reading Achievement

While the concern of this study was the analysis of teacher-pupil

verbal interaction in the reading group situation, in anticipation that at some later date the patterns of interaction between the teacher and specific pupils might be explored, teachers were requested to submit a rank-order list of the pupils in their class according to their judgment of the pupils' reading achievement. This information was not used in the present investigation.

Teacher Professional Data Questionnaire

In order that the teacher sample could be described in some detail, in anticipation that differences in teacher behavior might be better understood in the light of differences in their professional preparation and/or expressed beliefs and attitudes about the teaching of reading and grouping as an organizational technique, a professional data questionnaire was prepared. This questionnaire served as the basis for a personal interview between the investigator and the teacher following the completion of the study. A copy of the questionnaire is included in Appendix C.

Anecdotal Records of Classroom Events

While the audio-recorders would pick up verbatim records of teacher-pupil verbal interaction, in order that the subsequent analysis and discussion would be facilitated, an ongoing record of classroom events in the form of anecdotal records that would clarify and explain certain aspects of the verbal interaction were prepared during each observation session. Materials used in the lesson were described; page numbers of reading materials were noted; blackboard exercises used in the reading lessons were copied down; and assignments were iden-

tified. Non-verbal behavior of both the teacher and the pupils were sometimes noted as well. Some of these records were of course very subjective; however, taken with the actual recordings they helped provide a fairly complete description of activities in each classroom during the reading lesson observed.

While preparing the anecdotal records, the investigator also attended to the activities among those groups who were not specifically interacting with the teacher. For example, the kinds of work being done, their attention to the task, and the specific behavior of certain children and groups of children were recorded.

It was during the observation of the action in the independent groups in the third class visited that the observer, having been asked previously to offer some advice about one particular child, began to attend to the behavior of that child. In observing this child as he worked independently at his desk what became apparent almost immediately were the limited contacts he seemed to have with other children. The exceptions were the child who sat in front of him and the child who sat behind him, both members of his reading group. This observation raised a question about the who to whom aspects of pupil-pupil interaction in classes where pupils were grouped on the basis of reading ability. Was the pattern observed for this one child idiosyncratic or was it representative of a general trend in the pupil-pupil contacts of children in classes where pupils were grouped for reading? In order to explore this problem, a decision was made to take advantage of the observation visits to record, if only briefly, pupil-pupil interaction in the independent groups in this and subsequent classes. Sketches of the group seating arrangements which had been prepared in

the two previous classes were continued, only now pupils were identified by row and desk number. It was therefore possible to keep a record of pupil-pupil interaction while identifying participants according to their reading group. There was no reliability check on the observations, and the observations were made on a random basis since the main concern of the investigator was to collect anecdotal data pertaining to the teacher-directed reading lessons. However, the results available do raise a number of interesting questions which suggest a need for further analysis at a later date. The findings of these informal observations are presented and discussed in Appendix D for those who may be interested in the results.

PREPARATION OF THE VERBAL INTERACTION DATA

It was reported in a previous section that the Sony TC 110 audio-taperecorder was an adequate recording device for the collection of the verbal behavior of both teachers and pupils in the observed classes. However, since the tapes could not be controlled for the purposes of transcribing the verbal behavior to written records, the first step was to re-record the cassette tapes using a Uher 5000 tape recorder. The Uher 5000 is designed as a transcribing recorder, having a foot pedal attachment which allows for both forward and backward control of the tape during transcription. Two tapes were prepared, one for each of the cassette tapes recorded during the reading lessons observed.

Verbatim typewritten transcripts (3 copies) of the teacher-pupil verbal interaction were prepared from the cassette tape closest in proximity to the teacher for each classroom visit. A sample page

from one day's lesson with explanatory notes is included in Appendix E. It should be noted that specific steps were taken in the preparation of the transcripts to facilitate the later analysis. For example, teacher verbal behavior was typed in upper case letters while pupil verbal behavior was typed in lower case letters.

The identification of specific pupil verbal behavior presented more difficulties than did the teacher verbal behavior. First it was necessary to identify whether one pupil was speaking or whether a number of pupils were responding in unison. Instances of unison responses were identified by underscoring. It was also necessary to identify changes in speakers among the pupils and to identify unsolicited comments by pupils. This identification was achieved by placing brackets around unsolicited pupil verbal statements. The use of these brackets to identify unsolicited pupil statements proved very useful to the later analysis of oral reading responses where pupils' corrections of the oral reading miscues of their peers were easier to analyze.

Verifying the Typed Verbatim Transcripts

To insure the accuracy of the typewritten transcripts, the investigator and one other reader checked each transcript against the second audio-tape recording. While a limited number of changes in the transcripts were necessary, some valuable data were sometimes added from the second recording. This was particularly true in those classes where the teacher tended to interact with the reading groups while the pupils remained in their own desks.

Special audio-tapes. In verifying the transcripts, it was obvious that three of the original tapes provided clear data for one but

not another of the groups. In order that more complete audio records would be available for the Flanders' Interaction Analysis, the best sections from the two audio recordings were re-recorded on a third tape. This tape was then used once again to verify the typewritten transcript. The adequacy of the tape was established, thus supporting its use for the Flanders analysis.

COMPILATION OF THE DATA

In order to catalogue the data collected for the analysis, separate looseleaf binders were used for each of the classes. Each binder included the various data collected during the preliminary visits, including the anecdotal records, the pictures of the reading groups, the completed teacher interview form, and the set of transcripts for each observation period. Copies of seatwork exercises and other reading materials used during the sessions, where available, were also included. Photostat copies of the original reading material were sometimes included in close proximity to the pupil's transcribed oral reading responses. This procedure, while very simple, made the handling of the vast amount of data necessary for the analysis much easier. It also made it possible to explore related questions without too much difficulty.

THE PILOT INVESTIGATION

The major purpose of the pilot investigation was to determine the modifications that might be required in the data collection procedures and to ascertain whether or not the verbal data collected could

serve the purposes of the investigation.

Since the major study was to involve observation in grade one and grade three classes, arrangements were made to visit both a grade one and a grade three class in order to observe and record the verbal interaction at the two grade levels. Three observations were held in each of the pilot classes.

The teachers who participated in the pilot study were not part of the major investigation and therefore the investigator was free to discuss the recording procedures and the purposes of the analysis during the visits. Both teachers were very cooperative and allowed the investigator considerable freedom in trying out the different types of recording equipment and in moving about to determine the best positions for the equipment under the conditions of each class. This procedure helped the investigator to determine some of the steps that might have to be taken in other classrooms to insure the best possible recordings.

Several decisions which affected the procedures followed in the major study were made on the basis of information gathered during these observations.

(1) The Sony TC 110 tape recorder was selected over the Telefunken Magnetaphon 300 on the basis that it provided as adequate a recording, yet was more mobile and less noticeable.

(2) Battery operated equipment was chosen over direct current operation on the grounds that it was

- (a) more mobile
- (b) less likely to cause accidents
- (c) less likely to be out of service because of disconnection by pupils and teachers as they moved about the class.

(3) The need to have two strategically positioned tape recorders in order to pick up all the verbal interaction became apparent during these observations.

(4) The procedures to be followed in transcribing from the cassettes to the spool tapes of the Uher were established and the special equipment was designed and prepared by the Audio-Visual Media Center.

(5) The Uher recordings for these classes were made at a speed of 15/16ths in order that fewer tapes would have to be purchased for the major study in order to accommodate the large amount of data to be collected. Recordings at this speed were of very poor quality. In consultation with the technical personnel at the Audio-Visual Media Center, the decision was made to increase tape speed to $3 \frac{3}{4}$. The tape for the last visit was prepared at this speed and proved far superior.

(6) In attempting to make out the verbal behavior on the poorer quality tapes, padded stereo headphones were used. These headphones did increase the quality of the reproduction, even on the better tapes and were therefore used throughout the study in the preparation of the transcripts and for the Flanders analysis.

(7) The need for some scheme that would help the investigator learn the names of pupils for the purposes of keeping accurate anecdotal records was also determined and affected the decision to take pictures of the reading groups in order that the pupils could be identified by name prior to and during the observation.

(8) The decision to devise a transcription scheme that would allow for the easy identification of the teacher and pupil behaviors was initially worked through on the basis of information gleaned during

the pilot observations. The need for a typewriter having an electronic carriage return in order to speed up transcription of the short statements that characterized much of the interaction was also suggested and followed through upon in the major study.

Complete verbatim transcripts were not prepared from the tapes made in these classes. However, on the basis of the audio-recordings, it became obvious that the analytical scheme devised for the content analysis (FIER) would require some modification. From these informal observations, it was recognized that some attention would have to be given to:

- (1) extending and making more explicit the solicitation categories, and

- (2) modifying the system to account for unsolicited corrective reading behavior directed at pupils by their peers.

The original intention of using the audio-tapes from these lessons in the training of the observers in the Flanders system of analysis did not materialize. Unfortunately, due to a technical fault in the Uher transcribing equipment, the tapes prepared for these classes were ruined. Apparently, the recording head of the Uher was misaligned and this was not discovered until after the recording head had been cleaned during one of the periodic checkups to which it was subjected throughout the study.

The teachers were a great help in assuring the observer that, after the first visit they became increasingly less aware of both the observer and the equipment. There were also signs from the pupils that once the initial strangeness had passed, they too ignored the observer. This situation lent support to the assumption of the major

study that the presence of the observer would not influence classroom behavior to any great degree. However, it was also clear that preliminary visits to each classroom in the major study should be arranged.

As the points suggest, these pilot visits insured that a number of problems that might have seriously impeded the progress of the major study were pointed up and solved well in advance of the major study.

DESCRIPTION OF THE CLASSROOMS

In describing the classrooms observed in this study, attention is given to a description of the teachers, the basal reading practices, the grouping procedures, and the general content of the lessons observed.

While there is no attempt in later sections to explain the specific verbal behaviors observed in the light of this information, these data should serve to orient the reader to some of the general characteristics of the sample of classes upon which the later analyses are based. It is anticipated that this information will not only raise some interesting questions as the findings, conclusions, and interpretations are presented, but that this information will serve to explain some of the necessary steps taken in altering the research design of the study during its progress. It is imperative, for example, that the reader recognize that beyond the usual influences imposed by an observer, the investigator exerted absolutely no influence over the normal ongoing behavior of teachers or pupils in these classes. The control rested, as usual, with the classroom teacher's own decisions.

Lastly, it must be pointed up that the contract between the in-

investigator and the teachers in this study was that each teacher's anonymity would be guaranteed. That promise, meant that the material presented in this section has to be very general and certainly non-class specific. No apologies are offered for continuing with this position on anonymity for the future of classroom studies undoubtedly rests on the trust between investigator and teacher. Without that trust, many classrooms will necessarily and rightfully remain closed.

Description of the Teachers

It was known that the teachers who participated in this study shared certain characteristics. All were female and each reported using a basal reading method in reading lessons when pupils were organized into three reading groups for the purposes of teaching and instruction. Furthermore, each teacher shared a willingness to participate in the study. While the data reported below will show that some of the teachers shared certain experiences and expressed similar ideas and opinions, for the most part this group of ten teachers included as interesting a cross-section of classroom teachers as we might expect to find.

The information included in this section was collected during a personal interview with each teacher following the observation session. An interview form included in Appendix C served as the basis for the kinds of questions explored during the interview.

Teaching experience. The range in years of teaching experience was from 1 to 30 years, indicating a wide range of experience across the ten teachers. While four teachers had less than 5 years of teaching experience, only 1 was a beginning teacher. While several teachers

mentioned limited experience in the upper elementary grades, most were experienced primary teachers within the limitations of their years of teaching.

Teacher education. Seven teachers had trained initially in the Province of Alberta, one trained in another Canadian province, and 2 trained outside Canada. Only one teacher had a degree before entering the profession, while all others reported completing one year at a training college or normal school, or two years in a university teacher education program. Six teachers had completed their Bachelor of Education (B.Ed.) degree at the time of the study and only 1 teacher reported no advanced study beyond a year of normal school. Several teachers were increasing their qualifications through attendance in university extension courses. All but 2 teachers indicated a concentration in elementary as opposed to secondary education.

Reading courses. Nine teachers reported at least an introductory general primary methods course. Only one reported a senior (semester) course in the teaching of reading.

Nine teachers reported informal study of reading through attendance at in-service programs, teacher convention sessions, publisher's workshops, and meetings of the local International Reading Association council. The key source of information for teaching reading referred to by 7 teachers was the guidebook accompanying the basal series. Yet each teacher reported that she did not accept the ideas and suggestions as prescriptive.

These teachers, then, had had little formal training in the teaching of reading but indicated that they were interested in knowing more about reading.

Grouping procedures indicated by the teachers. Eight teachers reported that they had always grouped for reading. When asked why, most replied that it was a viable organizational procedure for accommodating the range of ability levels of pupils in their reading classes. One teacher responded that the major reason she grouped was that the supervisory staff required it. This teacher had nothing positive to say about the practice, except for the very lowest achievers in the class.

The major disadvantage of grouping perceived by all teachers was that grouping meant more preparation and planning, since three lessons had to be set up daily rather than one. But, because of the problems it solved, grouping, they said, made their teaching easier in the long run.

Each grade one teacher said she depended upon her observations of pupils during the first month of school and upon the results of readiness tests in assigning pupils to their respective reading groups. If there was a discrepancy between the test results and the decisions made on the basis of observation of pupils in the classroom, each teacher reported that she tended to let her own judgment, based upon the observed behavior, guide the placement of the pupils in their respective groups.

All the grade three teachers indicated that they used the records of the pupils' past achievements in reading, especially the test results reported in the cumulative records, and information on pupil performance gleaned in discussions with other teachers. Most teachers said that while 1 or 2 pupils might be shifted to a higher or lower group during the term, once assigned, the pupils tended to stay in the

same group.

Eight teachers reported carrying out a number of activities which they felt were positively related to reading development with the class as a whole. Three of the grade one teachers, for example, stated that they taught "phonics" lessons to the whole class, and that they sometimes selected other word analysis or comprehension skills exercises recommended in the manuals for whole group presentation.

Basal reading practices indicated by the teachers. All but 2 teachers reported that they had always taught by the basal reading approach. The materials available for all classes were the basal readers, workbooks, teacher's guide, and the achievement tests for the series. While grade one teachers indicated they made some use of other materials accompanying the series, grade three teachers made no mention of any materials other than readers, workbooks, tests, and the guidebooks.

The teachers stated that they used the basal reading approach primarily because the program materials were made available. However, 8 of the 10 teachers indicated that they were pleased with the results of the program and that they would be content to continue using the materials. Only 2 teachers expressed serious concern about the basal method and both suggested that they were considering trying another approach the following year.

In discussing the use of the guidebook, only 1 teacher reported that she used it "a lot". The other teachers indicated that they thought of it as a resource book, especially for written exercises and the supplementary activities needed for independent seatwork. Most teachers expressed the opinion that the guidebook did not influence

their classroom practices as much as the intuition and knowledge about the teaching of reading acquired through classroom experiences with different learner-readers. (Only one teacher was seen to use the guidebook to any extent during the course of the observed lessons.)

Six of the 10 teachers reported supplementing the basal approach through extra lessons in word recognition and especially phonics. Each teacher devised her own lessons in line with what she believed to be the important skills needed by pupils at the time. No teacher reported using a structured program for word analysis and in 8 out of 10 classes many of these supplementary activities were carried out with the whole class.

Summary. These data from the personal interview records suggest that the teachers in this study, both in terms of their teaching and educational backgrounds, and their attitudes as expressed in their decisions about grouping and the basal reading approach represent a cross-section of the teaching population. The teachers were both experienced and inexperienced; young and old; they had trained in Alberta and elsewhere; their teacher education ranged from 1 year to 5 years; they both liked and disliked the basal reading approach; and they had mixed feelings about the advantages and disadvantages of grouping. Thus, while the investigator was unable to exert anything but the most minimum control over the selection of the teacher sample for this study, it would seem appropriate to suggest that this group of teachers share a range of characteristics similar to those we would expect to find in the general population of teachers in the Province of Alberta.

These data have simply described the teacher sample so that the

reader may have some idea about the teachers involved in this study. No doubt, in reviewing the results of this study a question which will arise many times is whether these characteristics are related to the verbal behavior observed in the lessons. While the answer to that question is well beyond this study, it is not impossible that future studies might explore this issue to some advantage.

Description of the Reading Groups

A major purpose of this study was to compare the verbal interaction of teachers and pupils, where the pupils were grouped according to the teacher's perceptions of pupils' abilities and/or achievements in reading. The size and sex composition of each class and the size of each reading group at the two grade levels is reported in Table 3.1. These data show that there was considerable variability in number of pupils assigned to these classes even within the two grade levels. While these differences existed, it is interesting that the first grade high groups, with one exception, were larger than both the average and low groups. In the third grade, the high groups, with one exception, were smaller than the average groups.

Differences in the composition of the reading groups rest primarily with the teacher's perceptions of the abilities of pupils in her class and how those different abilities might best be dealt with in the instructional context. It is interesting that the third grade teachers were in less agreement on the organization patterns of the groups than were the first grade teachers. However, since there is evidence that differences in reading ability become more pronounced as pupils progress through the grades, these differences across the two

grade levels may reflect those changes in the pupil population.

The importance of the size of the reading groups rests primarily in the opportunities the smaller group provides for more interaction on the part of individual group members. That is, the larger the reading group, the greater the probability that teachers may interact less with individual pupils, or conversely, the smaller the group, the more likely that the amount of teacher interaction with individual pupils will be increased. In discussion of the FIER analysis this point will be returned to a number of times.

Since each teacher had indicated prior to the study that her reading class was organized into three reading groups, it had been anticipated that it would be possible to observe, analyze, and compare teacher-pupil verbal interaction in the different group contexts. In actual practice, however, especially in the grade three classes, this was not always possible.

In two third grade classes, the high and average groups met as one group for the reading lesson. In Class VI the pupils in the high group always joined the average group for the reading lesson, although once they did meet the teacher to discuss some enrichment reading activities related to the social science unit under study. In Class VII, the high group was always joined with the average group for the teacher directed activity, but when given independent activities they were required to complete several more of the same exercises.

In another third grade class, the teacher met with the average and low groups during each observation session but only met the high group for a teacher-directed lesson once. During each of the other observations, the high group worked independently at tasks assigned

for several days in advance.

In one class, during the four observation sessions, the teacher did not interact in the group context with either the high nor the average group. Instead, they were left to work at independent reading activities during the reading period. While the teacher went about to check on work being completed, and offered guidance where required, group meetings for the expressed purposes of teaching were held only with the low group. This class was deleted from the sample on the grounds that with group lessons recorded for the low group only, it would be impossible to compare intra-class reading groups in line with a major expressed purpose of the study.¹

In practice, it was only in one of the five grade three classes that there were teaching sessions held regularly with each of the reading groups. While it could be argued that under these conditions the idea to compare groups was not warranted, the fact that each teacher indicated a three group organizational plan supported the idea, that whatever analyses were possible should be completed, in order that some insights might be gained into the relations among high groups and combined high-average groups, and their teachers, compared with other groups at the grade three level.

The limiting effect of these differences among teachers in terms of the kinds of activities initiated with the different reading groups has been cited as a major limitation of the study in Chapter 1.

¹ Transcripts were prepared for this class and were examined before the decision to delete the class from the sample was made.

Length of the Lessons

The length of time spent with the different reading groups during each of the four visits to the nine classes is recorded in Table 3.2. The times specified should be accepted with caution for the determination of the length of the lesson with a specific group was not always easy. For example, in Class III a group would be sent to the reading table and would then not meet with the teacher for 10 minutes or more. Procedural directions, often given prior to any group session or between group sessions, were not timed since they were seldom specific to one group. There were, of course, interruptions during the group meetings as well. However, barring these difficulties, the length of the group lesson as reported was determined by timing the lesson from the point the teacher joined the group and began to interact with the group, showing an intention to remain and direct most of her attention to that group. The lesson was considered terminated when the group left the direction of the teacher to proceed with their independent work, go on to another lesson, or in some cases break for recess.

In examining the data in Table 3.2 it is apparent that the length of the group meetings varied within classes and across classes. With one exception, for example, the total lesson time with the low group in grade one was less than the time spent with the high group. Only in Classes I and V did the length of the low group lesson exceed that of the average group.

The differences for each group across the three visits reveals that the teachers did not follow a rigid timetable each day, but instead varied the length of the daily group lesson, possibly to accommodate the specific lesson activity or the perceived needs of the group

Table 3.2. Length in Minutes of the Four Observed Lessons for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Length of lesson in minutes				Total Observation Time
		Observation 1	Observation 2	Observation 3	Observation 4	
I	H	20	22	12	20	74
	A	25	11	15	20	74
	L	20	13	21	10	64
II	H	26	10	12	15	63
	A	3	5	15	12	35
	L	15	13	5	8	41
III	H	24	13	20	10	67
	A	18	6	18	12	54
	L	16	12	12	15	55
IV	H	20	15	10	6	51
	A	23	10	12	12	57
	L	25	7	6	12	50
V	H	18	12	10	16	56
	A	22	13	15	10	60
	L	20	16	17	16	69
VI	H	11				11
	C	9	15	26	24	74
	L	20	8	12	10	50
VII	H					
	C	27		10		37
	L	30	15	12	14	71
VIII	H			11		11
	A	26	16	8	23	73
	L	19	8	15	9	51
IX	H	5	7	10		22
	A	39	10	16	7	72
	L	7	15	11	27	60

at that point in time.

In grade three, the differences were not so patterned as at the grade one level, indicating that grade three teachers agree less on the procedures to be followed in working with groups. Whereas Teacher VI spent twice as much time with her combined group over the low group, Teacher VII spent four times as much time in face to face group interaction with the low group over the combined group.

While Teacher VIII had a high group at work in her class, she interacted only once with the high group in a group teaching lesson. During other visits the group was left to work independently. Only Teacher IX met her high group with any regularity. Whereas Teacher VIII spent almost twice as much time with her average group over the low group, Teacher IX reversed the procedure and spent more time with the low group.

The limiting effect of these differences in the length of the daily reading lessons with the groups has been stated as a major limitation of the study in Chapter 1.

GENERAL CONTENT OF THE LESSONS

The content of basal reading lessons may be expected to vary from day to day because of the different types of learning experiences devised by the authors and the specific types of lessons recommended. While there are variations from basal series to basal series, it is characteristic of the approach to provide suggested activities in the following areas:

- (1) Preparing pupils for reading the selection. Opportunities are provided for pupils to learn the new concepts being presented for the first time in the series in the immediate selection. During the earliest learning to read experience, the pronunciation of the new words is stressed. Gradually attention is directed toward the new word meanings to be encountered. Recognizing that not all pupils will have the necessary background to appreciate the selection content, it is also recommended that some time be spent in discussion aimed at helping pupils acquire the background information necessary to the comprehension of the selection.
- (2) Guiding the comprehension of the selection. The practice usually recommended is that the teacher will ask a question and that the pupils will then have a purpose for reading, that of answering the question. Beyond this general sort of purpose question, questions are asked in order to provide experiences in isolating details, getting at the main ideas of the selection, reflecting upon the information gleaned and so on. The teacher will pose a specific question and pupils will read a few lines or a paragraph in order to answer the question. At the end of the reading, it is usually suggested that the selection be read through in order that the selection theme may be appreciated as a whole.
- (3) Extending skills and abilities. Beyond the skills and abilities specific to the selection at hand, lessons are to be devised for the express purpose of teaching selected skills of word analysis and comprehension. These lessons will not depend so much upon the reader content but may concentrate upon exercises included in the guidebook and/or materials in the pupils' workbooks.
- (4) Extending interests. Proceeding on the assumption that the instructional program should result in pupils acquiring an appreciation for what is read and a recognition of the value of reading, lessons specific to extending pupils' interests in reading are usually recommended as a kind of wind-up to the work completed in reading a selection in the reader. While there are a number of activities suggested, one, for example, is to introduce the pupils to other stories or books on a similar or related topic to the one under discussion in a selection or unit of materials in the reader.

These then are the very general lesson activities recommended.

In order to determine just what kinds of lessons predominated in the different groups in the different classes, the transcripts were examined and certain activities identified. These different activities are summarized in Figure 3.1. While these categories of lesson types

DESCRIPTION OF THE LESSON TYPE CATEGORIES

1. Preparation for reading-vocabulary: emphasis on the introduction to, or review of the pronunciation or meaning of words and phrases introduced in the reading selection.
2. Preparation for reading-background: emphasis on discussion of pupils' experiences and knowledge relevant to the comprehension and/or interpretation of the reading selection to be studied.
3. Guided reading: question-answer exploration of the selection content where the reading selection was used as a source of information for pupil responses.
4. Oral reading: where pupils were required to read through the selection aloud under teacher direction without explicit guidance in the form of questions to be answered.
5. Follow-up questions on the selection content: once the story had been read through by pupils either orally or silently as an independent activity, pupils were brought together and questioned on the content of what they had read.
6. Word analysis: where specific word analysis skills such as phonics, and structural analysis were introduced and/or reviewed.
7. Listening lessons: pupils were read to from a selection (usually by the teacher) and then questioned by the teacher on its content.
8. Extension of interests: group meeting was aimed at providing an opportunity for pupils to discuss the general aspects of a story or unit with the intention of exploring related interests. The actual lesson might involve pupils selecting or reading from related texts or planning their own stories based on the lesson content.
9. Exercise completion: where the lesson revolved around the use of mimeographed, blackboard or workbook exercises aimed primarily at specific skills development, such as word analysis or comprehension.
10. Directions for independent work: time taken in the group context to explicitly set forth the independent work activities of the group.
11. Other: where the verbal interaction was not specific to reading or involved topics other than those referred to above.

Note. During the course of a single group meeting, one or more of these lesson types might evolve. For example, after preparing pupils for the vocabulary demands of the selection, the teacher might move directly to the guided or oral reading of the selection and then on to a discussion of the independent work activities, etcetera.

Fig. 3.1. Summary description of the lesson type categories identified on the basis of the general activities observed in the reading lessons in the groups in the nine classes.

parallel those described above, they are more specific and do reflect what was observed in the lessons in this study.

The emphasis on these different activities in the reading groups in the observed classes will be a subject for discussion in the FIER analysis. There it will be shown that there were class differences, grade level differences, and group differences in the emphases given to these different reading lesson activities.

One point which should be noted is that in many lessons, the general content of the lesson would shift during the reading period with one group. That is, while there were lessons which concentrated upon one activity only, it was not unusual for the lesson to begin with an introduction or review of new concepts, followed by guided or oral reading of the selection, followed then by an emphasis on the preparation for the independent work activities. These different emphases will be examined in greater detail in the FIER analysis.

ANALYSIS OF THE DATA

This investigation involved several separate and, to some extent, quite different analytical approaches. Furthermore, each was very complex and requires careful and extended explanation. For that reason, explicit description of the analytical procedures has been left for subsequent chapters.

Flanders' Interaction Analysis is introduced in Chapter 4. The methodological procedures are outlined and the application of the system in the present investigation are described. While the original Flanders system was used without modification, several categories were

subscripted according to certain behaviors specific to the teaching of reading. The findings of the Flanders' analysis are presented in Chapter 5.

The Focused Interaction Episode in Reading was designed specifically for the analysis of the content of the verbal interaction between the reading teacher and learner-readers. The development of the system and the procedures followed in applying it to the analysis of the observed verbal behavior are presented in Chapter 6. The findings for the FIER analysis are included in Chapter 7, thus allowing for easy reference to the procedures followed.

From the information about teacher-pupil verbal interaction in reading made available through the application of the two major analytical schemes, a third analytical scheme, The Observation System for the Analysis of Primary Reading Lessons, was developed. The rationale for this system, its method of application, and the ways it may be used to interpret verbal interaction in the reading class are reported in Chapter 8. The findings of a preliminary investigation using the technique are reported in Chapter 9.

SUMMARY

This chapter has described the design of the research project, making explicit the selection of the classrooms, the kinds of data collected, and the specific steps taken in their collection. The preparation and nature of the verbatim transcripts of the observed behavior were explained and the analytical techniques were outlined. The design of a pilot investigation to determine the feasibility of the

procedures and subsequent modification in the procedures of the major study were described. The classrooms observed during the study have been described in terms of certain professional characteristics of the teachers, (including their opinions and expressed positions on grouping and the basal reading approach); the grouping procedures used; the length of the group lessons; and the general content of the observed lessons.

In the next chapter, the procedures followed in using Flanders' Interaction Analysis in the present study will be presented.

CHAPTER 4

DESCRIPTION OF FLANDERS'

INTERACTION ANALYSIS

To accomplish the purposes of this study, two major research instruments were used in analyzing classroom verbal interaction during reading instruction. Flanders' Interaction Analysis was selected to describe differences, if any, in the affective patterns of interaction between teacher and pupils, when the latter were grouped for teaching on the basis of the teacher's judgment of their performance in reading. The specific steps taken in applying Flanders' Interaction Analysis to the verbal data from the reading classes will be the subject of this chapter.

INTRODUCTION TO THE INSTRUMENT

Since the classroom behavior is both variable and complex, observers are confronted with the problem of ensuring that an accurate record of the spontaneous verbal behavior of teachers and pupils can be obtained. As one response to the need for analytical systems for classifying classroom verbal interaction, Flanders developed Interaction Analysis, described as:

...an observation procedure designed to minimize these difficulties, to permit a systematic record of spontaneous acts, and to scrutinize the process of instruction by taking into account each small bit of interaction (Flanders, 1965, p. 18).

Essentially, Flanders' system concentrates on the analysis of the teacher's behavior where the influence pattern involves the degree and kind of controls the teacher exerts, through her own verbal behavior,

on pupils' freedom of action for controlling their own behavior.

Our interest is to distinguish those acts of the teacher that increase students' freedom of action from those acts that decrease students' freedom of action.... The system of categories is used by the observer to separate those acts which result in compliance from those acts which invite more creative and voluntary participation... (Flanders, 1965, p. 18).

An assumption basic to Interaction Analysis is that verbal behavior represents an adequate sample of a teacher's total behavior.

Because the procedures involved in observing and analyzing classroom verbal behavior with the Flanders' observational system have been well documented (Flanders, 1965; Amidon and Flanders, 1967) those procedures are only outlined in this section. A more complete description is included in Appendix F.

Overview of Flanders' Observational Scheme

(1) Flanders' observational instrument consists of the ten categories summarized in Figure 4.1. (The categories are described in more detail in Appendix F.) Observers, familiar with the ten categories listen (in class or to recordings) and record observed verbal behavior. The category designations are recorded in sequence every three seconds. If there is a change in behavior during the three second period, the new behavior is recorded.

(2) Once the record of the observed behavior has been recorded, a matrix is prepared in the manner prescribed in Appendix F. The matrix or matrices serve as the basic data for subsequent analyses.

(3) When two or more matrices are compared, Flanders' recommends that the statistical significance of the observed differences be determined through the application of Darwin's chi-square, as described in Appendix F.

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- | | |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indirect
influence | <ol style="list-style-type: none"> 1. Accepts feeling: accepts and clarifies the feeling of the students in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included. 2. Praises or encourages: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head or saying "uh huh?" or "go on" are included. 3. Accepts or uses ideas of student: clarifying, building, or developing ideas or suggestions by a student. As teacher brings more of his own ideas into play, shift to category five. 4. Asks questions: asking a question about content or procedure with the intent that a student answer. |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
-
- | | |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct
influence | <ol style="list-style-type: none"> 5. Lectures: giving facts or opinions about content or procedure; expressing his own ideas; asking rhetorical questions. 6. Gives directions: directions, commands, or orders with which a student is expected to comply. 7. Criticizes or justifies authority: statements, intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing, extreme self-reference. |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
-
8. Student talk-response: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.
 9. Student talk-initiation: talk by students, which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.
-
10. Silence or confusion: pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer.
-

Fig. 4.1. Summary description of the ten Flanders' Interaction Analysis categories (from Amidon and Flanders, 1967, p. 14)

(4) Designated areas of the matrix serve as the basic data for the interpretation of the observed behavior, including: category proportions; proportion of teacher-talk, pupil-talk, and silence and confusion; indirect teacher behavior (Categories 1, 2, 3, and 4); direct teacher behavior (Categories 5, 6, and 7); and any cell or cell area of the matrix.

These general steps in applying Flanders' Interaction Analysis and in interpreting the observed behavior gave direction to this study of primary reading lessons with different reading groups. The specific steps followed and the types of interpretations initiated are discussed in the following sections.

OBSERVER TRAINING AND RELIABILITY

In this study, the investigator, trained in the use of Flanders' Interaction Analysis according to the procedures outlined below, observed and recorded all the behavior referred to in this study of primary reading classes. To establish the reliability of the investigator in the use of Flanders' Interaction Analysis, the procedures suggested by Amidon and Flanders (1967) were followed, including:

(1) The observer and one other person (a former classroom teacher) memorized the descriptions of the ten categories, taking into account the finer differentiations described by Amidon and Flanders (1967, pp. 18-23).

(2) Once the categories were memorized, each trainee worked independently with Levels I and II of the Interaction Analysis Training Kit (Amidon and Amidon, 1967). Each listened to the taped lesson seg-

ments, recorded the interaction, and then compared the observations with those provided by the authors.

(3) After ten hours of independent work the researchers worked together with the training tapes, analyzing and discussing the segments. Discrepancies were noted and resolved, where possible, by referring to relevant information in The Role of the Teacher in the Classroom (Amidon and Flanders, 1967).

(4) Because the investigation would rely on audio-tape recordings of classroom verbal interaction for the analysis, neither trainee spent time observing and recording classroom interaction under normal classroom conditions. Instead, after 20 hours of general training, segments of the tape recordings collected during the investigation were selected at random and analyzed by each of the trainees.¹ These segments varied in length from 5 to 10 minutes. The same procedures described above were followed. Together, the two researchers played back the original recordings, discussed their observations, and checked out any discrepancies by referring to the comments by Amidon and Flanders (1967).

Observer Reliability

After approximately thirty hours of training, an estimate of the reliability of the trainees was calculated using Scott's coefficient of reliability as recommended by Flanders (1967a). While Flanders

¹ The intention had been to use recordings made in other classes for this training procedure; however, tapes which had been prepared were destroyed by a technical fault in the equipment. Since classes were out for the summer, it was impossible to acquire a second set of practice tapes.

acknowledged that this statistic was not totally adequate, he contended that it was the best available. In attempting to locate a more appropriate statistic, the investigator found that while the Scott formula has been criticized (Mitchell, 1970), no other statistical test was recommended in the literature at that time, and so the Scott formula was used.

The Scott Formula is
$$\pi = \frac{P_o - P_e}{1 - P_e}$$

Where P_o is the proportion of agreement, and P_e is the proportion of agreement expected by chance which is found by squaring the proportion of tallies in each category and summing these over all categories (Flanders, 1967, p. 161).

...can be expressed in words as the amount that two observers exceeded chance agreement divided by the amount that perfect agreement exceeds chance (Flanders, 1967, p. 161).

Three estimates of reliability were calculated before the investigator began analyzing classroom verbal interaction for the purpose of the investigation. The reliability coefficients obtained were 0.86, 0.88 and 0.92. Since the investigator had had the advantage of being present at each of the recording sessions, these coefficients were considered more than adequate to allow the analysis to proceed.

Continuous estimate of reliability. Flanders (1967a) reported that there are difficulties in maintaining the reliability of observers over extended periods of time. To ensure that the investigator was maintaining the level of performance reached at the end of the training period, intra-observer checks on reliability were calculated during the course of the study. Specifically, ten-minute segments were analyzed a second time at two points in the study and a reliability coefficient was calculated. The first was calculated upon completion

of the analysis for the third, first grade class, and the second was calculated at the completion of the analysis for the second, third grade class. The reliability coefficients obtained were .91 and .88 respectively and were considered sufficient at each point to allow the investigator to continue with the analysis without further training.

PROCEDURES FOLLOWED IN THE INVESTIGATION

In this section, the procedures followed in analyzing the verbal interaction of teachers and pupils during intra-class groups for reading are described in detail.

Using Flanders' Analysis with the Audio-Tape Recordings

The basic data for the analysis consisted of audio-tape recordings prepared during grade one and grade three lessons. While audio-tapes are acknowledged as less reliable than actual classroom observation, two procedures followed were thought to reduce this problem. First, the investigator who served as observer was present at each recording session, preparing anecdotal records of various classroom events as the reading lessons progressed. The investigator was, therefore, familiar with the lesson context of the tapes prior to the analysis of the recordings. While it could be argued that this procedure would bias the observations, it was assumed that the benefits accruing from familiarity with the lessons outweighed that possible disadvantage. This was clear in the training period when the investigator and the other trainee discussed the various discrepancies in their respective analyses. Some of their disagreements could easily

be traced to the additional information available to the investigator. When the specific nature of the lesson was revealed to the second researcher, agreement often followed. While the investigator may simply have imposed her perceptions on the second trainee, there were many instances where the discrepancies in the category designations could be attributed to the second trainee's lack of familiarity with lesson content.

Secondly, the audio-tapes were prepared for playback on a Uher 5000 transcribing tape recorder. This allowed for easy and instantaneous playback of sections that presented difficulties, without loss of the sequential progress of the lesson. Therefore, segments of verbal interaction could be suspended in time, thus facilitating the finer differentiations that were sometimes necessary.

Modification of the recording procedure. Instead of listing each verbal interaction numerically (5, 5, 4, etcetera), a procedure suggested by Krahmer and others (1969) was followed. Krahmer described how IBM scoring sheets (General Purpose Answer Sheets) could be used to record the interaction, by marking the category number of the observed interaction on the scoring sheet. In this study, each scoring sheet was identified by a code number representing the teacher, the number of the visit, and the reading group, and was numerically coded to ensure that the sequencing was maintained. (Seventy interactions were recorded on each IBM scoring sheet.) The use of the scoring sheets greatly facilitated the preparation of data processing cards, since these were punched automatically as the completed sheets were read through the IBM optical scanner. (A sample of one of the completed scoring sheets is included in Appendix G.)

Analysis of the Data

The analysis of the data was handled by the IBM 360/30 computer facilities of the University of Alberta, using a program developed by Flatham of the Division of Educational Research, University of Alberta. The program made available when this study was initiated was capable of generating the following information, relevant to the analyses in this study.

(1) Preparation of the matrices, including cell totals as percentages of column, row, and the total matrix.

(2) Calculation of the column totals and percentages for each of the ten categories.

(3) Calculation of the percentages of teacher-talk, pupil-talk, silence and confusion.

(4) Calculation of the percentages and ratios of indirect/direct teacher behavior; revised indirect/direct teacher behavior; and teacher-talk and pupil-talk.

(5) Darwin's chi-square for the significance of the difference when two or more matrices are compared.

The program is still being revised as different analytical dimensions are added to it.¹

Subscription of the Original Flanders' Categories

It was intended in this investigation to use Flanders' system in-

¹ The program has recently been extended to handle any size matrix to a maximum of 20 rows and 20 columns. The program is still being prepared, but would be available for consultation through the resources of the Division of Educational Research, University of Alberta.

tact, without modification, in order that the findings of this study could be incorporated into a general and growing body of knowledge about classroom behavior based upon the Flanders' system. However, during the classroom observations and the training process (especially when samples of behavior from the observed classes were used for practice), it became increasingly clear that some of Flanders' categories needed to be refined to make explicit the reading content of the observed behavior.

Two problems in extending the number of categories were obvious. First, if the number of categories were increased this would distort the Flanders' analysis. Second, any increase in the number of categories would mean that the IBM scoring sheets could not be used. Since a distortion of the Flanders' analysis was to be avoided, and the loss of the scoring sheet procedure would strain the very limited budget of the investigator, an alternate scheme had to be devised. Eventually, it was decided that the additional information could be obtained by subscripting several categories. The behavior was identified according to Flanders' definition and then the specific nature of the reading behavior content was subscripted to the original. What was done was to record the category according to the prescribed procedures for using the IBM scoring sheets and to record the subscripted behavioral definition by a small but visible slash through the normal mark on the form. While the differentiated categories would not become part of the matrix design, they could be totalled and percentages of the instance of the behavior could be calculated and the different proportions across classes and groups could be compared.

Four of the Flanders' categories were subsequently subscripted

in this manner. They were as follows:

Category 6: Giving directions. Whenever a directive called specifically for a pupil to read aloud or silently, this was indicated by the slash procedure. Thus, it was possible to identify directives that were specific to the reading act.

Category 7: Criticism or justifying authority. This category was subscribed to account for corrective feedback to the oral reading of pupils. That is, if the teacher's behavior was aimed at correcting a pupil's oral reading miscue, the slash procedure was used. By keeping a record of this behavior, it was possible to determine more specifically the kind of criticism prevailing in some of the classes and groups.

Category 8: Pupil responses. In reading classes many of the verbal responses of pupils involve them reading aloud from their reading materials rather than responding in their own words. In order to account for the percentage of pupil verbal behavior which involved oral reading responses, Category 8 was subscribed to indicate the incidence of oral reading responses.

Category 10: Silence and Confusion. Category 10 is a very broad category in the Flanders' system and is one category which has often been differentiated in other attempts at increasing the amount of variability in the behavioral descriptions based upon extensions of the Flanders' system. (See for example, Hough, 1967.) In this study, Category 10 was differentiated to identify those instances where the silence involved pupils reading silently. Since one of the propositions of the grouping procedures is that face-to-face interaction is increased, it seemed relevant to have a record of the amount of non-interacting reading behavior going on in the reading group situation.

The results of these category differentiations are reported in the next chapter. While the addition of these categories developed out of an interest in the possibilities for describing reading lessons more specifically in the Flanders' analysis, the use of the procedure at this point in the study was influential in leading the investigator to the development of the revised reading category system discussed in Chapter 9.

SUMMARY

This chapter has described briefly the analytical procedures involved in using Flanders' Interaction Analysis as the research tool in this study for the analysis and interpretation of the affective dimensions of teacher-pupil verbal interaction in primary reading groups. Modified procedures, such as the use of audio-tapes and IBM scoring sheets for recording the observed behavior have been outlined. The procedures for preparing and comparing matrices and specific areas of the matrices in line with the research questions have been made explicit.

The steps taken in training and measuring the reliability of the investigator as observer were described. The reliability of the observer both prior to and during the observations was reported as adequate.

The subscription of the original Flanders' categories in order to make more explicit the role of the reading content of the observed behavior were also described.

CHAPTER 5

FINDINGS AND CONCLUSIONS: FLANDERS' INTERACTION

ANALYSIS OF THE PRIMARY READING GROUPS

OVERVIEW

Flanders' Interaction Analysis was used in this study as a statistical and descriptive procedure for ascertaining the differences, if any, in the affective dimensions of the patterns of teacher-pupil verbal interaction in primary reading groups at the first and third grade levels. In this chapter, the findings of that analysis are reported in accordance with the suggestions for interpretation discussed by Flanders (1965) and Amidon and Flanders (1967) as described in Chapter 4.

Certain conclusions arising from the findings of the analysis are also referred to in this chapter. The rationale for this departure from normal procedures in reporting upon a research project rests in the complexity of this study. To leave all conclusions until the end of the report would undoubtedly place too great a burden on the reader. Of course, the conclusions are summarized in the final chapter as well, especially as they relate to the implications of the research.

In the first section, the results of the Darwin chi square analyses to determine the significance of the differences observed in the matrices of the reading groups in each class are reported and discussed.

In the second section, the general and specific areas of the matrix outlined by Flanders and set out in Appendix F are examined.

To test the significance of the differences in the proportions of behavior observed in each of the ten categories for the different reading groups, a chi square analysis was computed and is reported for each group for each category. Both the descriptive and statistical interpretations are basic to the discussion of the 10 categories of behavior. Several other areas of the matrix, including: the proportions of teacher and pupil talk, the ID Ratios ($I/I+D$) and the Revised ID Ratios ($i/i+d$) characteristic of the different levels of reading groups are discussed in terms of the patterns observed across the groups at the two grade levels.

During the early stages of the investigation, it will be recalled, a decision was made to subscript several of the original Flanders categories in an attempt to make more explicit the reading emphasis in the patterns of behavior observed in the reading classes. The findings show the proportions attributable to the differentiated behaviors: directions to read (Category 6); corrective feedback to oral reading miscues (Category 7); pupils' oral reading behavior (Category 8); and pupils' reading silently (Category 10) and are discussed in the third section of the chapter.

During the process of analyzing and interpreting the differences in the patterns of verbal interaction characteristic of the reading groups in the different classes, a question was raised as to the stability of the patterns of interaction from day to day. That is, were the patterns of verbal interaction of each reading group similar from lesson to lesson, or did they vary? If they did vary, how did they vary? Moreover, would the observed patterns reveal anything more about the affective climate of reading groups than the composite matrices

tabulated from several observations? It is questions such as these that are considered in the fourth section of this chapter.

COMPARISON OF THE COMPOSITE MATRICES FOR
THE READING GROUPS IN EACH OF THE
OBSERVED CLASSES

Once the matrices were tabulated for the reading groups in the different classes, a Darwin chi square was calculated to test the null hypotheses that there would be no significant difference between the interaction patterns of the different reading groups in each of the first and third grade classes.

The results of the Darwin chi square tests for significance of difference in the matrices of the grade one groups are summarized in Table 5.1. The grade three results are summarized in Table 5.2.

The levels of confidence reported for the grade one reading groups clearly support the rejection of the null hypotheses that there would be no significant differences when the patterns of interaction of the different reading groups were compared. With the exception of the comparison of the average and low groups in Class II, the probability that the observed differences between the high and average (combined), the high and low, and the average (combined) and low groups could have occurred by chance was less than .05 and less than .01 in 11 of the 15 comparisons.

The levels of significance reported for the third grade classes also support the rejection of the null hypotheses. With one exception, the comparison of the high and combined groups in Class VI, the differ-

Table 5.1. Summary of the Levels of Significant Difference When the Interaction Matrices for the High, Average, and Low Reading Groups in Each of the Five Grade One Classes are Compared

C l a s s	The reading groups compared					
	High-Average		High-Low		Average-Low	
	χ^2	Sig.	χ^2	Sig.	χ^2	Sig.
I	113.44	<.05	235.42	<.001	216.61	<.001
II	129.49	<.01	115.84	<.05	102.48	NSD
III	135.43	.001	225.99	<.001	284.23	<.001
IV	115.59	<.05	146.25	<.001	130.57	<.01
V	149.76	<.001	260.09	<.001	196.82	<.001

Table 5.2. Summary of the Levels of Significant Difference When the Interaction Matrices for the High, Average, and Low Reading Groups in Each of the Grade Three Classes are Compared

C l a s s	The reading groups compared					
	High-Average		High-Low		Average-Low	
	χ^2	Sig.	χ^2	Sig.	χ^2	Sig.
VI ¹	68.61	NSD	132.55	<.01	415.83	<.001
VII ²					240.48	<.001
VIII ³	273.38	<.001	289.27	<.001	179.57	<.001
IX	307.83	<.001	452.29	<.001	219.94	<.001

¹ High group met once only; on all visits combined with average group

² High group never met independently of the average group

³ High group met once only

ences between groups are highly significant (with 8 of the possible 10 comparisons less than the .001 level of significance).

It was reported in the discussion of the different grouping procedures observed in the grade three classes (Chapter 3, p. 83) that in Class VI, the high reading group met independently of the average reading group only once during the observation period, and that during that visit, as during all other visits, the high and average reading groups were combined. That the two groups were perceived by the teacher as requiring a very similar reading program may explain why there was no significant difference in the observed patterns of interaction between these two groups.

The results of the statistical analyses offer strong evidence that in the observed classes, the patterns of interaction characterizing the reading groups at the varying ability levels were significantly different. Having established that, the next question to be explored is how did the groups differ? The answer to that question must rest in the interpretation and comparison of the different areas of the matrices for the reading groups and will be the subject of the next sections.

INTERPRETATION AND COMPARISON OF THE AREAS OF THE PRIMARY READING GROUP INTERACTION MATRICES

Data from the original computer output will be presented in tabular form throughout the discussion which follows.

Comparison of the Proportions of Behavior in the 10 Flanders' Categories

The proportions of behavior in the different Flanders categories were calculated by summing the total number of tallies in each category, and dividing each by the total number of tallies in the matrix. Each of the ten categories is examined separately in this section in terms of the proportions observed in the reading groups at the two grade levels. By way of support for the descriptive analysis of the differences in the observed behavior, the proportions in each category for the different reading groups have been analyzed statistically using the chi square test for significance.

Category 1: Acceptance, clarification and recognition of students' feelings. The summary of the percentages of Category 1 behavior in the reading groups is reported in Table 5.3. The chi square results are summarized in Table 5.4. Of the ten categories, the least proportion of the observed behavior was recorded in Category 1 for all reading groups at both grade levels. This finding is not surprising in that Flanders (1965) reported that this teacher behavior is exhibited little in most classes. Whereas Flanders reported that about 1.5 per cent of the interaction usually reflects teachers' acceptance of pupils' feelings, in these primary reading groups, this behavior seldom exceeded 0.5 per cent.

While the difference between the average and low groups in Class V was statistically significant in terms of this behavior, there were no clear cut differences among the groups and no trends are apparent in the other classes. This evidence suggests that in primary reading groups, little of the verbal interaction involves the teacher clarifying or recognizing pupils' emotional responses.

Table 5.3. Summary of the Frequencies and Percentages of Tallies in Category 1 (Acceptance of Pupil Feelings) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Classes	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	7	0.3	10	0.5	14	0.6
	II	0	0.0	1	0.1	1	0.1
	III	4	0.2	3	0.2	3	0.1
	IV	8	0.5	8	0.6	4	0.2
	V	7	0.4	5	0.2	16	0.8
Three	VI	0	0.0	4	0.2	1	0.1
	VII			2	0.1	0	0.0
	VIII	0	0.0	0	0.0	1	0.1
	IX	5	0.6	6	0.3	8	0.3

Table 5.4. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 1 (Acceptance of Pupil Feelings)

Grade	Classes	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	1.226	NSD	2.750	NSD	0.261	NSD
	II	0.035	NSD	0.039	NSD	0.479	NSD
	III	0.045	NSD	0.111	NSD	0.008	NSD
	IV	0.086	NSD	1.402	NSD	2.079	NSD
	V	1.342	NSD	2.397	NSD	8.115	<.01
Three	VI	0.056	NSD	1.180	NSD	0.196	NSD
	VII					1.060	NSD
	VIII	0.459	NSD	0.000	NSD	0.085	NSD
	IX	1.015	NSD	0.935	NSD	0.017	NSD

* df = 1

The anecdotal record suggested that in many instances, the Category 1 behavior observed in these classes seemed to be aimed at appeasing pupils' feelings about their problems with the act of reading, rather than with their responses to what was read. Although, as the small proportions would suggest, pupils had little to say about their problems in reading. This finding will become more relevant later in the analysis.

Category 2: Teacher praise and encouragement. The percentages of behavior in this category for each of the reading groups are summarized in Table 5.5. The levels of significance (chi square) calculated when the reading groups in each class were compared are summarized in Table 5.6.

While there are differences in the proportion of behavior in this category reported for the different reading groups (Table 5.5), with few exceptions, the differences were not statistically significant (Table 5.6).

In Class I, the low reading group was characterized by significantly more praise behavior than the high and average groups; whereas in Class II, the high reading group recorded significantly more praise behavior than either the low or average reading groups. In the grade three classes, a similar situation pertains, in that the low groups in Classes VII and IX record a significantly greater proportion of praise behavior than the other reading groups.

Apparently, in these primary reading classes, the reading groups recorded about the same proportions of teacher praise and encouragement. Where there were differences, the trend in several classes was for the low groups to receive more praise than the more able groups.

Table 5.5. Summary of the Frequencies and Percentages of Tallies in Category 2 (Teacher Praises or Encourages) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	212	8.9	164	8.3	243	10.8
	II	98	5.1	42	3.2	47	3.6
	III	155	8.9	124	8.4	181	8.1
	IV	123	7.8	101	7.4	133	8.3
	V	113	6.7	154	6.6	136	7.0
Three	VI	15	6.1	181	7.4	142	8.9
	VII			67	4.3	138	5.8
	VIII	41	9.4	209	7.6	99	6.4
	IX	41	5.2	165	7.9	265	10.3

Table 5.6. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 2 (Teacher Praises or Encourages)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	0.576	NSD	4.628	<.05	7.774	<.01
	II	7.067	<.01	3.912	<.05	0.412	NSD
	III	0.292	NSD	0.846	NSD	0.93	NSD
	IV	0.156	NSD	0.271	NSD	0.803	NSD
	V	0.025	NSD	0.131	NSD	0.312	NSD
Three	VI	0.541	NSD	2.008	NSD	2.687	NSD
	VII					4.124	<.05
	VIII	4.710	<.05	1.687	NSD	2.186	NSD
	IX	6.256	<.05	18.465	<.001	7.456	<.01

* df = 1

This trend, however, was not supported in all classes and suggests that some differences are class specific rather than related to the reading group levels of achievement.

The results in Table 5.5 suggest that the teachers at both grade levels, with the exception of Teacher II with the average and low groups, recorded between five and ten per cent of the interaction in this category, indicating differences across classes at both grade levels. With the exception of Class II, the range in the grade one classes was from 6.6 to 10.8 per cent and in the grade three classes from 5.2 to 10.3 per cent. While these figures suggest that the grade one teachers may have offered more praise, in Class II as little as 3.2 per cent of the observed behavior was recorded in this category, thus supporting the above suggestion that the amount of praise is class rather than grade specific.

Category 3: Acceptance or use of pupils' ideas. The percentages of behavior in Category 3 for each reading group are summarized in Table 5.7. The summary of the levels of significance (chi square) when the reading groups were compared is reported in Table 5.8.

For the most part, the percentage of behavior in this category runs at about 3 per cent or less, with the exception of Class IX, where this category accounted for 5.6 per cent of the interaction with the high group.

The raw data suggest that at the grade one level in all but one class there was a tendency for the high groups to record a proportionately greater amount of behavior in this category than the other reading groups. At the grade three level, this trend persisted, for in all classes, the high group recorded a greater percentage of be-

Table 5.7. Summary of the Frequencies and Percentages of Tallies in Category 3 (Acceptance or Use of Pupil Ideas) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	36	1.5	17	0.9	40	1.8
	II	5	0.3	0	0.0	1	0.1
	III	44	2.5	61	4.1	21	0.9
	IV	35	2.2	33	2.4	32	2.0
	V	40	2.4	28	1.2	25	1.3
Three	VI	7	2.9	65	2.7	7	0.4
	VII			39	2.5	31	1.3
	VIII	14	3.2	27	1.0	10	0.6
	IX	44	5.6	28	1.3	30	1.2

Table 5.8. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 3 (Acceptance or Use of Pupil Ideas)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	3.888	<.05	0.498	NSD	6.727	<.01
	II	1.967	NSD	0.584	NSD	0.000	NSD
	III	6.408	<.05	15.393	<.001	41.768	<.001
	IV	0.132	NSD	0.189	NSD	0.618	NSD
	V	8.177	<.01	6.028	<.05	0.074	NSD
Three	VI	0.034	NSD	13.565	<.001	27.492	<.001
	VII					7.193	<.01
	VIII	18.747	<.001	14.712	<.001	1.315	NSD
	IX	42.427	<.001	55.353	<.001	0.320	NSD

* df = 1

havior in this category than the low groups. In three classes, the high groups recorded more of this behavior than the average group and in these instances, the differences were highly significant ($p = <.01$).

With the exception of Class V at the grade one level, the differences between the high and low groups at the grade three level were even greater.

The reasons why these proportions are so low will become clearer as the proportions of behavior recorded in the other categories are examined.

Category 4: Teachers' questions. The summary of the percentages of behavior in Category 4 for the reading groups is recorded in Table 5.9. The levels of significance for the differences between the reading groups are summarized in Table 5.10.

What is readily apparent from the raw data is that with one exception, the teachers at both grade levels spent a considerable part of the class time asking questions. At the third grade level, the differences in the proportions of questions asked of the high, average, and combined groups compared to low groups were statistically significant in Classes VI, VII, and VIII.

The differences across groups within the classes were not so extreme in the grade one classes (Class V: 8 per cent for the low group to 14.9 per cent for the high group) as they were in the grade three classes (Class VI: 12.5 per cent for the low group to 26.2 per cent for the combined group; and Class VIII: 11 per cent for the low group to 27.3 per cent for the high group). By grade three, in terms of this dimension, the differences among the reading groups had increased. Apparently, lower achievers have fewer opportunities to respond to

Table 5.9. Summary of the Frequencies and Percentages of Tallies in Category 4 (Asking Questions) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	419	17.6	327	16.5	345	15.3
	II	59	3.1	42	3.2	30	2.3
	III	287	16.5	329	22.3	330	14.8
	IV	304	19.2	244	18.1	282	17.5
	V	251	14.9	295	12.6	155	8.0
Three	VI	60	24.6	639	26.2	200	12.5
	VII			165	10.6	324	13.6
	VIII	119	27.3	474	17.2	170	11.0
	IX	128	16.3	360	17.3	403	15.6

Table 5.10. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 4 (Asking Questions)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	0.983	NSD	4.390	<.05	1.049	NSD
	II	0.026	NSD	1.646	NSD	1.801	NSD
	III	16.904	<.001	2.270	NSD	34.011	<.001
	IV	0.635	NSD	1.479	NSD	0.137	NSD
	V	4.383	<.05	43.220	<.001	24.002	<.001
Three	VI	0.314	NSD	25.644	<.001	111.092	<.001
	VII					7.567	<.01
	VIII	72.836	<.001	25.090	<.001	30.554	<.001
	IX	0.398	NSD	0.228	NSD	2.445	NSD

* df = 1

teachers' questions in grade one, and even fewer when compared with their higher achieving peers as the grade level increases. Recognition of these differences supports the speculation that lack of experience in dealing with questions could be a factor which might retard the overall reading growth of low achievers.

In Class II the number of questions asked of pupils was very low by comparison with all the other classes and remained low across the three reading groups. The anecdotal records showed that a standard procedure was followed by the teacher in the group encounters. First, the teacher read the selection aloud to the groups and then had individual children read parts of the selection aloud. While some time was taken to introduce new vocabulary, most of the interaction in the group revolved around pupil difficulties with the oral reading task.

Category 5: Teacher lecturing or informational responses to pupils. The summary of the proportions of behavior in the reading groups in Category 5 is recorded in Table 5.11. The chi square comparisons are recorded in Table 5.12.

While the range in lecturing behavior in the third grade is from 4.7 (Class VIII, average group) to 30.3 (Class VI, high group) only one trend emerges from the data. That is, the grade three teachers tended to spend a greater proportion of time "lecturing" to the higher groups than to the average, combined, and low groups ($p = <.001$). This fits with the general observation in the anecdotal record that the grade three teachers aimed more procedural statements at their high groups in order that they could carry out their independent work activities.

At the grade one level, the differences were more erratic in

Table 5.11. Summary of the Frequencies and Percentages of Tallies in Category 5 (Lecturing) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	260	10.9	227	11.4	274	12.2
	II	320	16.7	169	12.8	231	17.8
	III	210	12.1	243	16.4	180	8.1
	IV	172	10.9	186	13.6	137	8.5
	V	142	8.4	213	9.1	222	11.4
Three	VI	74	30.3	433	17.8	209	13.0
	VII			494	31.7	378	15.8
	VIII	83	19.0	130	4.7	158	10.2
	IX	209	26.6	435	20.9	346	13.4

Table 5.12. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 5 (Lecturing)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	0.282	NSD	1.750	NSD	0.543	NSD
	II	9.284	<.01	0.741	NSD	12.961	<.001
	III	12.444	<.001	17.915	<.001	61.765	<.001
	IV	5.140	<.05	5.019	<.05	19.699	<.001
	V	0.554	NSD	9.089	<.01	6.378	<.05
Three	VI	22.749	<.001	48.720	<.001	16.207	<.001
	VII					138.961	<.001
	VIII	24.906	<.001	123.448	<.001	47.436	<.001
	IX	10.708	<.001	76.636	<.001	46.682	<.001

* df = 1

terms of the groups and tended to be class specific. Yet, grade one teachers tended to lecture or to provide information proportionately less often than the grade three teachers. The range, which was from 8.1 per cent (Class III, low group) to 17.8 (Class II, low group), raises an interesting question, especially when the range in the grade three classes is considered as well.

The question is, if groups are formed partly to ensure a greater proportion of individual pupil-teacher interaction, was that assumption being met in a number of groups in these classes? Apparently, at the grade three level, the reading group is established more for instructional rather than teaching purposes. That is, the teacher uses the group context to direct pupils in their independent work activities; and if they are high reading groups they are then left to work independently. Whether teachers should control the verbal interaction to the degree they do is beyond this investigation, but there is a clear indication here that these behaviors differentiate the pattern of interaction across reading groups, and probably deserve more attention in the study of the viability of reading groups as an organizational plan for meeting individual differences among pupils.

Category 6: Teacher giving directives. The summary of the percentages of the behavior in Category 6 for the reading groups is recorded in Table 5.13. The chi square comparisons for the different groups are summarized in Table 5.14.

Two very tentative trends are suggested by these data. First, teachers in the grade one classes tended to give more direction to all three groups than did the grade three teachers. Second, while there was a tendency toward stability across the groups in each class in

Table 5.13. Summary of the Frequencies and Percentages of Tallies in Category 6 (Giving Directions) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	186	7.8	154	7.8	241	10.7
	II	115	6.0	53	4.0	60	4.6
	III	125	7.2	76	5.1	199	8.9
	IV	76	4.8	60	4.4	114	7.1
	V	194	11.5	289	12.3	260	13.4
Three	VI	5	2.0	70	2.9	88	5.5
	VII			30	1.9	76	3.2
	VIII	6	1.4	108	3.9	93	6.0
	IX	10	1.3	91	4.4	146	5.7

Table 5.14. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 6 (Giving Direction)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	0.005	NSD	11.516	<.001	10.820	.001
	II	6.281	<.05	2.770	NSD	0.623	NSD
	III	5.769	<.05	3.832	NSD	18.457	<.001
	IV	0.287	NSD	7.461	<.01	9.810	.001
	V	0.648	NSD	2.942	NSD	1.055	NSD
Three	VI	0.555	NSD	5.250	<.05	17.616	<.001
	VII					5.650	<.01
	VIII	15.376	<.001	7.105	<.01	9.571	.001
	IX	16.101	<.001	26.112	<.001	3.900	<.05

* df = 1

terms of this behavior, there is a suggestion that the grade three teachers gave fewer directions to the high compared to the average (combined) and low groups, and the average (combined) compared to the low groups. There is statistical evidence to support this trend at the grade three level, but at the grade one level the statistical support is less evident. What does emerge at both grade levels is that a substantial proportion of the interaction involves teachers issuing directives.

Category 7: Teacher criticism or justifying authority. The summary of the proportions of behavior in each reading group for Category 7 is recorded in Table 5.15. The chi square results are summarized in Table 5.16.

At both grade levels, and in all classes, there is strong evidence that high reading groups were characterized by significantly less criticism than were low reading groups. And, with the exception of Class VII, where the differences were not significant, the average and combined groups recorded less criticism than the low groups.

While there was a tendency for the high groups to record less interaction in Category 7 over the average or combined groups, the differences at these ability levels, while statistically significant in five out of eight cases, were not so great as between the high and low groups nor the average (combined) and low groups.

These data also indicate differences in the way teachers at the two grade levels interact with their high reading groups. The findings show that high reading groups at the grade one level recorded a greater proportion of criticism than the high grade three groups.

These findings pertaining to the group differences in the criti-

Table 5.15. Summary of the Frequencies and Percentages of Tallies in Category 7 (Criticism or Teacher Justifies Authority) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	78	3.3	92	4.6	147	6.5
	II	148	7.7	190	14.4	166	12.8
	III	104	6.0	81	5.5	288	12.9
	IV	143	9.0	136	9.9	203	12.6
	V	76	4.5	138	5.9	181	9.3
Three	VI	1	0.4	69	2.8	221	13.8
	VII			68	4.4	90	3.8
	VIII	20	4.6	199	7.2	162	10.5
	IX	8	1.0	98	4.7	213	8.2

Table 5.16. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 7 (Criticism or Teacher Justifies Authority)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	5.323	<.05	26.444	<.001	7.106	<.01
	II	37.103	<.001	22.892	<.001	1.326	NSD
	III	0.383	NSD	52.408	<.001	54.699	<.001
	IV	0.708	NSD	10.640	.001	5.267	<.05
	V	3.741	NSD	31.810	<.001	18.135	<.001
Three	VI	5.120	<.05	35.860	<.001	174.135	<.001
	VII					0.896	NSD
	VIII	14.083	<.001	4.133	<.05	13.346	<.001
	IX	21.792	<.001	51.260	<.001	23.133	<.001

* df = 1

cism category may prove to be one of the most significant in the study, for not only do they indicate that low groups were characterized by more criticism, but that as the grade level increases, the gap between the high and the low groups increases. It was not that the low groups were criticized more at the higher grade level but that the high groups were criticized less. Apparently, something is operating in the early stages of reading that leaves pupils open to more criticism, no doubt reflecting the findings of Preston (cited in Edwards, 1962) that teachers and pupils alike have problems dealing with the early efforts of beginning readers. Moreover, they also have more difficulty dealing with the efforts of readers who do not make normal progress.

Given this evidence, one must seriously examine this situation and its meaning for the beginning reader. What is really being postulated here is that the classroom is a learning environment for beginning readers, or those who are still at a stage of beginning reading, may not be conducive to our achieving our goals of reading instruction. Whatever else, there is clearly a need to explore this problem further. Unfortunately, beyond indicating the differences in the amount of criticism characterizing the interaction in the different reading groups, the Flanders' analysis has not revealed the source of those difficulties. However, the FIER analysis, which focused upon the reading content of the verbal behavior in the reading groups will reveal some interesting insights into this problem, as will the discussion of the subscribed dimension of Category 7, which indicates teachers' corrective reactions to pupils' oral reading miscues.

Category 8: Pupil response behavior. The summary of the proportions of Category 8 behavior in the reading groups is reported in

Table 5.17. The results of the chi square analyses are summarized in Table 5.18.

While the results show that in some classes the differences observed across the reading groups are statistically significant, there are no observable trends when groups, classes, or the two grade levels are compared. Moreover, the ranges in the amount of pupil responding behavior were very similar at both grade levels (about 25 per cent of the interaction), indicating that pupils spend a considerable amount of the time responding to teachers' questions or directives.

Category 9: Pupil initiating behavior. The summary of the proportions of behavior in Category 9 for the different reading groups is recorded in Table 5.19. The chi square results are summarized in Table 5.20.

The findings suggest that at the grade one level the high and average groups were initiating more of the interaction than were the low groups. The differences observed, however, were statistically significant in only a limited number of groups.

At the third grade level, all comparisons between the average (combined) groups and the low groups were statistically significant, but as the raw data suggest, whether the average or the low recorded the greater proportion of behavior in this category was class specific. That is, in Classes VI (combined group), VIII, and IX, the average group recorded less behavior in this category than did the low group, whereas in Class VII, the combined group recorded more behavior in this category (14.8 per cent) than any other group in the sample. In other words, in these grade three classes the amount of pupil initiated behavior varied from group to group more so than in the grade one

Table 5.17. Summary of the Frequencies and Percentages of Tallies in Category 8 (Student Talk - Response Behavior) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Classes	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	613	25.7	578	29.1	488	21.7
	II	613	31.9	354	26.7	366	28.2
	III	442	25.5	313	21.2	495	22.2
	IV	397	25.1	305	22.3	407	25.3
	V	493	29.2	687	29.3	612	31.5
Three	VI	53	21.7	546	22.4	431	26.9
	VII			181	11.6	553	23.1
	VIII	101	23.2	709	28.7	487	31.4
	IX	224	28.5	293	23.7	599	23.2

Table 5.18. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 8 (Student Talk - Response Behavior)

Grade	Classes	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	6.147	<.05	10.668	.001	31.054	<.001
	II	10.027	.001	4.923	<.05	0.743	NSD
	III	8.150	<.01	5.836	<.05	0.522	NSD
	IV	3.138	NSD	0.023	NSD	3.688	.05
	V	0.005	NSD	2.236	NSD	2.416	NSD
Three	VI	0.063	NSD	2.940	NSD	10.576	.001
	VII					82.398	<.001
	VIII	11.174	<.001	5.800	<.05	3.463	NSD
	IX	7.031	<.01	9.349	<.01	0.167	NSD

* df = 1

Table 5.19. Summary of the Frequencies and Percentages of Tallies in Category 9 (Student Talk - Initiation) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	122	5.1	75	3.8	80	3.5
	II	125	6.5	76	5.7	74	5.7
	III	79	4.6	67	4.5	31	1.4
	IV	73	4.6	79	5.8	66	4.1
	V	53	3.1	87	3.7	50	2.6
Three	VI	1	0.4	26	1.1	44	2.7
	VII			230	14.8	115	4.8
	VIII	13	3.0	68	2.5	57	3.7
	IX	68	8.7	37	1.8	72	2.8

Table 5.20. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 9 (Student Talk - Initiation)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	4.566	<.05	6.872	<.01	0.152	NSD
	II	0.793	NSD	0.847	NSD	0.001	NSD
	III	0.001	NSD	36.218	<.001	34.183	<.001
	IV	2.035	NSD	0.492	NSD	4.453	<.05
	V	0.955	NSD	1.052	NSD	4.447	<.05
Three	VI	0.416	NSD	4.862	<.05	15.983	<.001
	VII					117.407	<.001
	VIII	0.487	NSD	0.392	NSD	5.104	<.05
	IX	76.542	<.001	52.196	<.001	5.136	<.05

* df = 1

classes where the high groups tended to predominate.

The percentages recorded in Table 5.17 show, that with the exception of the combined group in Class VII, very little of the verbal interaction was initiated by pupils in these reading groups.

Category 10: Silence and confusion. The proportions of behavior in Category 10 for the reading groups are summarized in Table 5.21. The chi square comparisons are recorded in Table 5.22.

The range of behavior in this category tended to vary from group to group in each class, but no trends were apparent. What is revealed is that while reading groups are meant to increase face to face interaction, from 10 to 30 per cent of the group time was characterized by silence or involvement in some non-verbal activity. (The anecdotal record suggested that little of the interaction was recorded as a 10 because of confusion or lost data.) While there are no comparable figures for whole group instruction, the behavior recorded in this category, like Category 5, raises some interesting questions about the assumption of grouping as an organizational practice to increase teacher-pupil verbal interaction. Later analysis will show that large portions of this time were spent in some classes having children read silently in their readers and for that reason, this behavior will be discussed in greater detail in that section which deals with the subscription of Category 10.

Summary. In this section the proportions of behavior recorded in the 10 categories for the different reading groups have been discussed.

The findings suggest that the differences in the interaction matrices could be traced to specific differences across the groups in

Table 5.21. Summary of the Frequencies and Percentages of Tallies in Category 10 (Silence or Confusion) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Reading groups					
		High		Average		Low	
		f	%	f	%	f	%
One	I	449	14.8	343	17.3	382	16.9
	II	438	22.8	397	30.0	320	24.7
	III	286	16.5	181	12.2	504	22.6
	IV	251	15.9	212	15.5	229	14.3
	V	318	18.9	447	19.1	285	14.7
Three	VI	28	11.5	402	16.5	259	16.2
	VII			281	18.1	685	28.7
	VIII	39	8.9	744	27.1	312	20.1
	IX	48	6.1	368	17.7	507	19.4

Table 5.22. Levels of Significance of Differences (Chi Square) When Behavior Within Class Reading Groups are Compared According to the Proportions of Category 10 (Silence or Confusion)

Grade	Class	Levels of significance by reading groups					
		High-Average		High-Low		Average-Low	
		χ^2	Sig.*	χ^2	Sig.*	χ^2	Sig.*
One	I	1.840	NSD	2.848	NSD	0.074	NSD
	II	21.169	<.001	1.536	NSD	9.233	<.01
	III	11.493	<.001	22.832	<.001	63.080	<.001
	IV	0.071	NSD	1.628	NSD	0.926	NSD
	V	0.033	NSD	11.354	<.001	14.530	<.001
Three	VI	4.171	<.05	3.550	NSD	0.083	NSD
	VII					57.299	<.001
	VIII	29.306	<.001	66.638	<.001	25.617	<.001
	IX	61.484	<.001	78.114	<.001	2.309	NSD

* df = 1

terms of the behavior recorded in the different categories, and several categories in particular.

While the groups were fairly stable in terms of the amount of behavior recorded in Categories 1 and 2, there was some evidence that the high groups were characterized by more teacher behavior in Category 3 (Teacher accepting and using pupils' ideas). It was suggested that pupils in high groups probably were allowed to express more of their own ideas and opinions than the other groups, and that this might explain the differences across groups observed in this category. However, in examining Category 9 (Pupil initiating behavior) there was no clear cut evidence that the higher achieving groups were initiating the interaction more than the low group, or interjecting unsolicited information, and so, if high group pupils were offering their own ideas and opinions, it must have been in response to the kinds of questions asked by the teachers. The proportions of behavior recorded in Category 4 (Teacher questioning) indicated that more questioning behavior was characteristic of the high group interaction patterns, and to some extent, of the average (combined) groups over the low groups. Apparently, while there were limited differences in the amount of pupil responding talk (Category 8) across the groups, the responses were attributable to different sorts of teacher behaviors. In effect, and this will be shown more clearly in the analysis of the subscribed categories, while the high and average groups were being asked questions about their reading (Category 4), the low groups were more often simply being directed (Category 6) to read aloud. They therefore had fewer opportunities to respond with their own ideas and/or opinions.

The most significant difference among the reading groups was

found in Category 7 (Teacher criticism and justifying authority).

The statistical evidence offered strong support for the conclusion that low groups recorded more behavior in Category 7 than either the average (combined) or the high groups at both grade levels. In turn, the average groups recorded more than the combined groups and high groups, and the combined groups recorded more than the high group. It is apparent, therefore, that the more able the reading group, the less likely the members will be criticized. In the present study, this conclusion was supported by statistical evidence.

Beyond establishing differences in the degree of criticism in relation to the level of ability of the reading groups, the evidence suggested that more able readers at the third grade level received less criticism than the more able readers at the grade one level. Because of this, the gap, in terms of this behavioral dimension, was greater among readers at different levels of ability in the third grade classes, suggesting that the climates of the reading groups in grade three were more radically different. It was suggested that this finding undoubtedly has considerable significance in terms of the learning opportunities of the different levels of readers and that analysis of the content of the verbal behavior in the reading groups may make more specific the problems in the teaching of reading reflected in these findings.

Ratios of Indirect--Direct Teacher Statements

Teacher statements in the Flanders' analysis are classified first as either direct or indirect. The intention of these general categories reflect upon the choice the teacher has in bringing pupils

into the interaction or in responding to pupils. Two of the major interpretations in examining the matrix that focus upon these behaviors are the calculations of the ratios of indirect and direct teacher statements: the I/D ratio and the Revised I/D ratio.

I/D ratio. The I/D ratio or the ratio of indirect to direct statements (I/I+D) is calculated by dividing the total number of tallies in Columns 1, 2, 3 and 4 by the total number of tallies in Columns 5, 6, and 7, plus the total in Columns 1, 2, 3, and 4.¹

An I/D ratio of .5 means that for every indirect statement there was one direct statement; an I/D ratio of .67 means that for every two indirect statements there was only one direct statement, etc. (Amidon and Flanders, 1967, p. 37).

The findings for the I/D ratios calculated for the reading groups are recorded in Table 5.23. The I/D ratios of the low reading groups in the first grade classes suggest that the interaction was characterized by more teacher direct behavior than indirect behavior. With the exception of one class, the ratios of the high and average groups were higher.

At the third grade level, the trend toward more direct behavior in the low group when compared to the other groups is not supported. However, in two of the four classes reported, the low group recorded even less indirect behavior when compared with the other groups, than was evident at the first grade level. In those classes where the low groups recorded higher I/D ratios than the high, average, and combined

¹ In another publication, Amidon and Flanders (1967a) recommended that the I/D ratio be calculated by summing the tallies in Categories 1, 2, 3, and 4 and dividing by the sum of the tallies in Categories 5, 6, and 7. Those ratios were calculated for this study and are included in Appendix H for readers more familiar with the meaning of these ratios.

Table 5.23. Summary of the Indirect-Direct Ratios (I/I+D) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	I/D ratios by reading groups		
		High	Average	Low
One	I	.562	.522	.492
	II	.217	.170	.147
	III	.527	.564	.445
	IV	.546	.504	.475
	V	.499	.430	.334
Three	VI	.506	.608	.403
	VII		.396	.457
	VIII	.615	.619	.404
	IX	.490	.473	.500

groups, the ratios did not approach the degree of indirectness recorded in the higher groups in the other classes.

Revised I/D ratios. The Revised I/D ratio focuses on the emphasis given indirect and direct motivation and control in the lessons. In calculating the Revised I/D ratio ($i/i+d$), the subject-centered categories, 4 (Questioning) and 5 (Lecturing) are deleted from the I/D ratio. That is, the total number of tallies in Categories 1, 2, 3 are divided by the number of tallies in Columns 1, 2, 3, plus those in 6 and 7.¹ The Revised I/D ratios for the reading groups in the nine classes are recorded in Table 5.24.

These data suggest that when low reading groups are compared with more able reading groups, the patterns of interaction suggest that teachers depend more upon the direct forms of motivation and control than upon the indirect forms.

In comparing the I/D ratios with the Revised I/D ratios the patterns are very similar in the first grade groups, and in the low third grade groups. However, the ratios for the more able third grade groups point up real differences when the first and third grades are compared, or when the high and low grade three groups are compared.

The degree of directness in the higher third grade group I/D ratios compared with the more indirect Revised I/D ratios suggest that the direct behavior recorded in the higher reading groups is subject

¹ As for the I/D ratio, Amidon and Flanders previously proposed that the Revised I/D ratio be calculated by summing the tallies in Categories 1, 2, and 3 and dividing by the sum of the tallies in Categories 6 and 7. Those ratios were calculated for this study and are included in Appendix H.

Table 5.24. Summary of the Revised Indirect-Direct Ratios (i/i+d ratios) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Revised I/D ratios by reading group		
		High	Average	Low
One	I	.491	.437	.433
	II	.282	.150	.178
	III	.470	.545	.296
	IV	.431	.420	.348
	V	.372	.305	.286
Three	VI	.786	.643	.327
	VII		.635	.505
	VIII	.679	.435	.301
	IX	.833	.513	.458

centered. Teachers exert very limited direct influence in motivating and controlling the behavior of the higher third grade reading groups. It is also clear that the direct control behaviors recorded for low reading groups in the first grade are evident in the low third grade groups. This finding raises a vital question. If low group membership remains fairly stable, and there is evidence that it does, what is the meaning of this continued direct control for less able readers? This question will be returned to in later discussion.

Proportions of Teacher-Pupil Talk

The percentages of teacher-talk and pupil-talk in the three groups for each of the nine classes are summarized in Table 5.25.

Although there were differences in the percentages of teacher-talk with the different reading groups, there is no discernable trend suggesting that teachers generally talked more or less during the interaction with one group over another. The individual teachers, however, exhibited considerable variation in the percentage of talk they controlled during the lesson. Among the grade one teachers, the range was from 38.8 per cent (Teacher II) to 62.0 per cent (Teacher III) for the average group. The range among the grade three teachers is from 56.7 per cent (Teacher IX) to 66.4 per cent (Teacher VI) for the high group; 41.7 per cent (Teacher VIII) to 60.0 per cent (Teacher VI) for the average group; and 41.8 per cent (Teacher VII) to 54.6 per cent (Teacher VI) for the low group. These figures suggest that grade three teachers tended to dominate the verbal interaction in the high and average groups more than the grade one teachers, but that they differed less in terms of their interaction with the low reading groups.

Table 5.25. Summary of the Percentages of Teacher Talk and Pupil Talk for the Reading Groups in Each of the Nine Classes

G r a d e	C l a s s	High Group		Average Group		Low Group	
		% Teacher Talk	% Pupil Talk	% Teacher Talk	% Pupil Talk	% Teacher Talk	% Pupil Talk
One	I	50.3	30.9	49.9	32.9	57.9	25.2
	II	38.8	38.4	37.5	32.5	41.4	34.0
	III	53.5	30.0	62.0	25.7	53.9	23.6
	IV	54.4	29.7	56.4	28.1	56.3	29.4
	V	48.8	32.4	47.9	33.0	51.2	34.1
Three	VI	66.4	22.1	60.0	23.5	54.2	29.7
	VII			53.8	28.1	41.8	29.5
	VIII	64.9	26.1	41.7	31.2	44.7	35.1
	IX	56.7	37.2	56.8	25.5	54.6	26.0

Two teachers stand out from the others at their grade level. Teacher II in all groups talked less than any of the other teachers, while Teacher VI talked much more than any of the other grade three teachers. To this extent, generalizing across classes is made very difficult, since teachers do exhibit idiosyncratic behavior patterns.

Much of what has been said about teacher-talk applies to the discussion of pupil-talk. In comparing the percentages of teacher-pupil talk, the most obvious finding, is that all the teachers talked more than the combined talk of all pupils in the reading groups. These figures were, however, lower than the 70 per cent average reported by Flanders (1965). Whereas the teachers dominated the verbal interaction about 50 per cent of the time, with minor variations for individual teachers, pupils contributed about 30 per cent of the verbal interaction. Of course, a large percentage of the pupil verbal behavior involved the pupils' reading aloud, a matter to be discussed in a subsequent section.

Interpretation and Comparison of Specific Matrix Areas

Specific matrix areas of the reading groups were examined and compared in this analysis. The results are discussed in Appendix I.

ANALYSIS OF THE SUBSCRIPTED CATEGORIES

Categories 6, 7, 8, and 10 were specially subscripted in order to allow for more specific identification of behavior within these categories which involved the "reading" component of the verbal interaction. These categories have been discussed in detail in Chapter 4 (p. 103). Directions (Category 6) which were specific to eliciting a

reading response were identified. Corrective feedback behavior to oral reading errors was set apart in Category 7 (Criticism or teacher justifying authority). Pupils' responding behavior involving oral reading were differentiated from non-reading responses in Category 8 (Pupil responding behavior). The silence and confusion category was subscripted to allow for the designation of the proportion of silent reading behavior.

The data are graphically presented in Figures 5.1 through 5.4 with the total percentage of the general category shaded to indicate the total percentage of the differentiated behavior. The findings for each group in each class at the two grade levels are reported.

Category 6: Directions--Directives to Read Orally

The findings for Category 6 are reported in Figure 5.1. These data suggest that much of the directive behavior in the grade one classes involved teachers directing pupils to make oral reading responses. While this behavior was still evident in the grade three classes, it was not emphasized to the same extent. In three grade one classes the directives to read exceeded 50 per cent of the interaction in the category. Teacher V who recorded the greatest proportion of directive behavior, also directed pupils to read aloud more than the teachers in the other classes. While there were no indications that the behavior was variable across groups in any specific direction, it is evident that when a teacher did use this behavior, she tended to use it with all groups about equally.

While the grade three teachers used the directive to read behavior less, they used it more with the low reading groups. The high

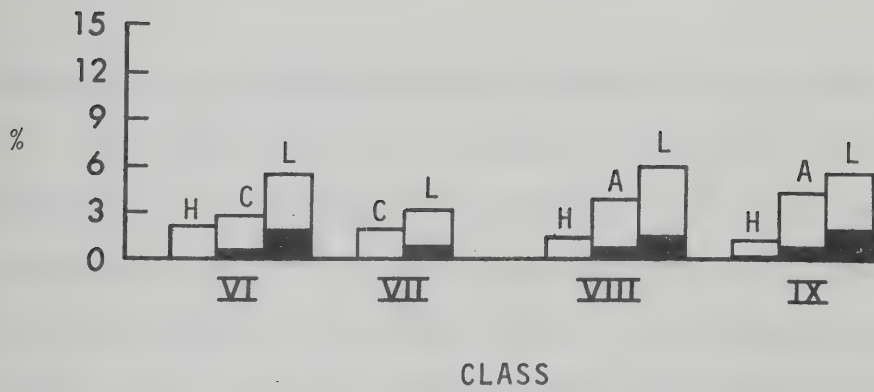
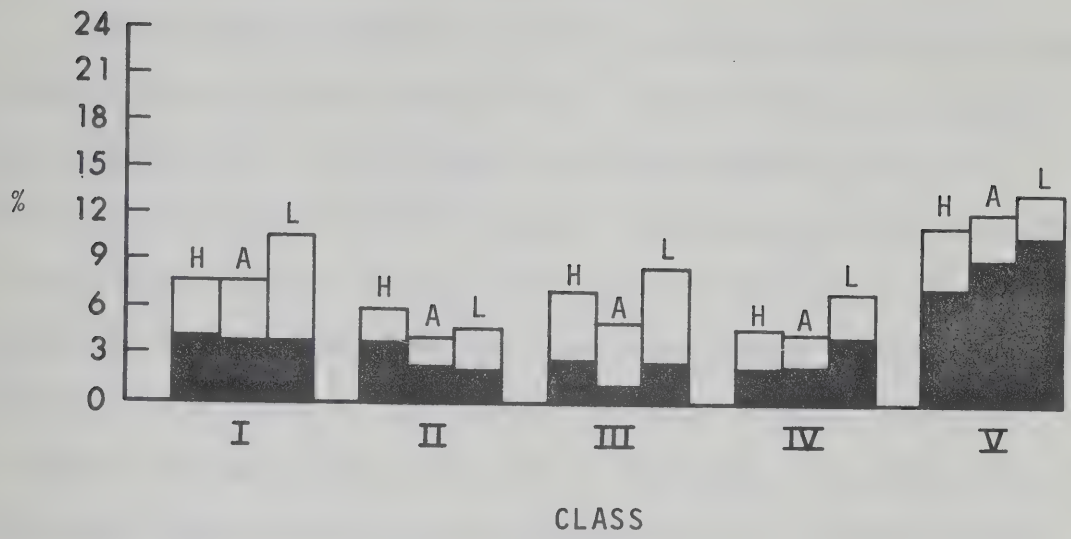


Fig. 5.1. Showing the proportions of Category 6 (Teacher directives) accounted for by teachers giving pupils directives to read orally for each reading group in each class

groups were given directions to read in only one class, and even there, the behavior was just barely discernable.

One of the mainstays of the basal reading approach is the guided reading lesson and the assumption that pupils should have a purpose for reading aloud. In the grade one classes observed, while the teachers undoubtedly had their reasons for asking pupils to read aloud, these reasons were not always articulated for the pupils. Instead, grade one reading groups and low third grade reading groups were often simply told or asked to read aloud. In Class V, these directions accounted for more than 10 per cent of the behavior recorded for the low group suggesting that this teacher had her own interpretation of the recommended practices of the basal reading approach, like every other teacher apparently.

Category 7: Criticism--Corrective Feedback to Oral Reading Miscues

The corrective feedback aspects of criticism are recorded in Figure 5.2. In examining these findings it is clear that much of the criticism directed at pupils in reading classes involved the teacher correcting pupils' oral reading miscues. Furthermore, except for Class II, it was the low groups at both grade levels who were corrected more. While Teachers II and IV were about equal in the amount of corrective feedback aimed at their groups, the differences in Classes I, III and V clearly point up just how much corrective feedback can be directed to the low group compared with the other groups. Not only were the low groups criticized more on the whole, but it was their oral reading responses which were the reciprocal influences upon that criticism.

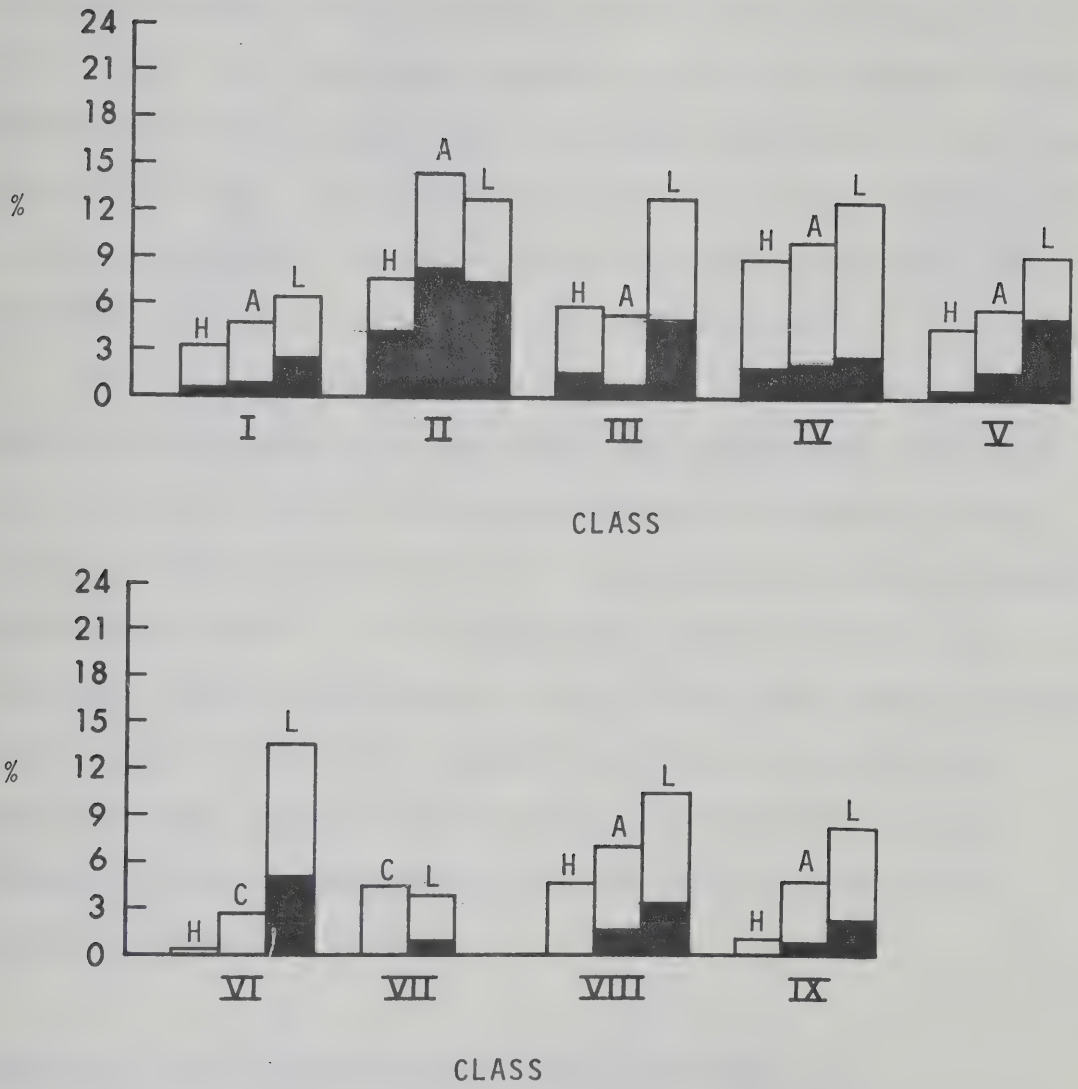


Fig. 5.2. Showing the proportions of Category 7 (Teacher criticism) accounted for by teachers providing corrective feedback to pupils' oral reading miscues for end reading group in each class

In the grade three class, the differences across the groups were even more acute, with the low groups getting twice the amount of corrective feedback for oral reading miscues over the average or combined groups. The high groups received no corrective feedback; either because they were not required to read aloud or they handled what they did read with ease. The anecdotal records and the report for the subscription of Category 8 makes this behavioral difference more understandable. Discussion is reserved for Category 8.

Since the low groups were so distinctly set apart from the other groups on this dimension, it is obvious that these pupils either had real difficulty reading the materials presented to them for instructional purposes or were called upon to read aloud more, and subsequently made more errors. It is not impossible that both factors were operating. Whatever the reason, it is clear that oral reading was the source of many of the direct teacher behaviors in low group interaction patterns, and may be at the root of the highly significant differences when the grand matrices of the reading groups at the different levels were compared.

Category 8: Pupil Responses--Oral Reading Responses

The percentages of the total interaction which involved pupils responding by reading orally are reported in Figure 5.3. Here the differences at the two grade levels are highly visible, with the grade one pupils responding with oral reading much more of the time than the grade three pupils. While there is no observable trend in the differences in the group responses at the grade one level, at the grade three level it is readily apparent that low groups responded with oral read-

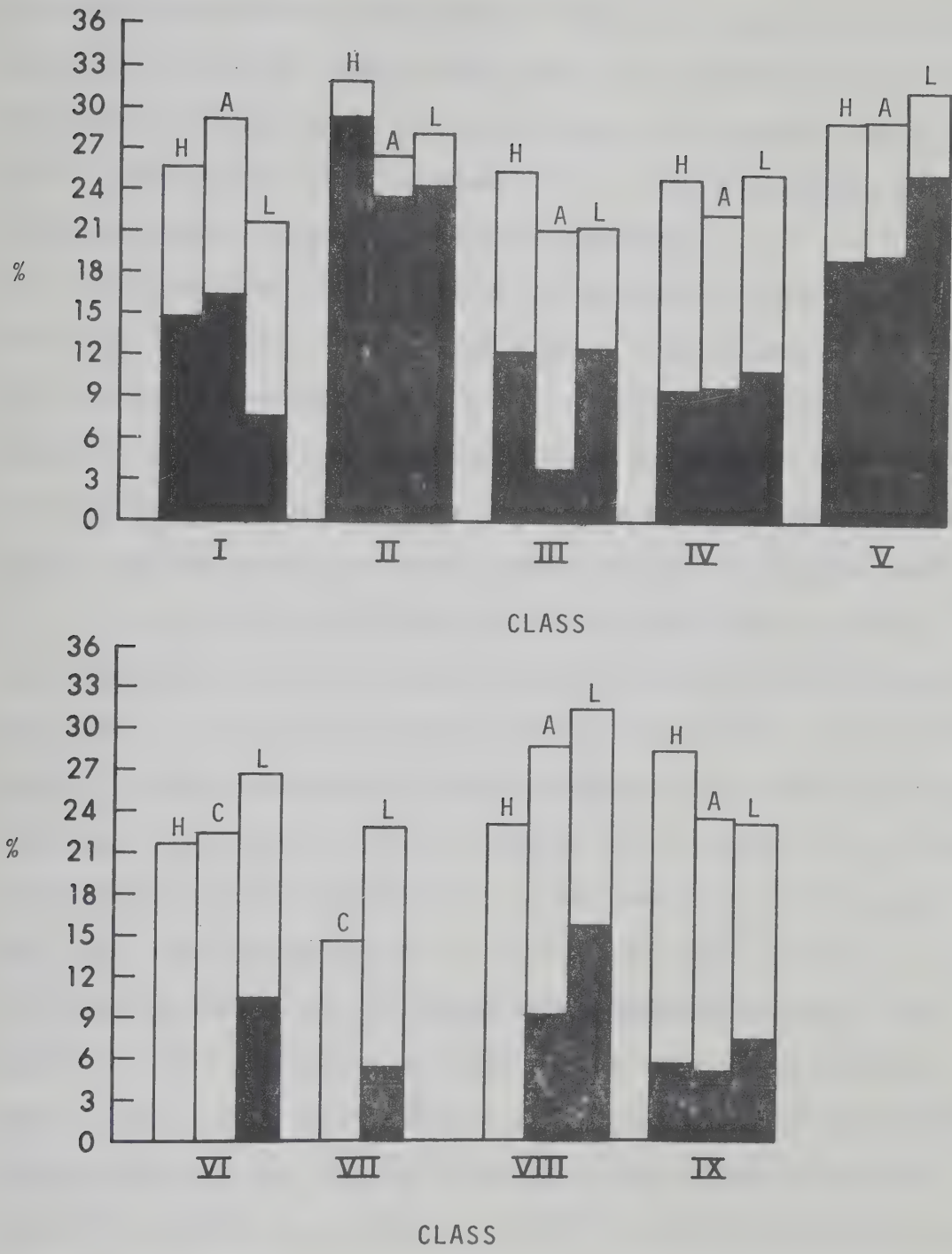


Fig. 5.3. Showing the propositions of Category 8 (Pupil responses) accounted for by pupils reading aloud for each reading group in each class

ing more often than the other groups. Where one or more of the other groups did respond by reading orally, the low groups still read aloud more during their lessons. With the exception of Class IX, high group pupils made no oral reading responses at the third grade level, and they were reading materials written by themselves.

It would seem, therefore, that the responses of grade one pupils were more controlled, with the high group in Class II responding with oral reading responses for 29.3 per cent of the total interaction time. Responses in the pupils' own words accounted for only 2.6 per cent of the high group responses, 3.0 per cent of the average group responses, and 4.2 per cent of the low group responses at the first grade level.

In view of the role of oral reading in these reading classes, and especially in the low reading groups, one question which is beyond the scope of this study, but which needs to be explored is what is the meaning of this oral reading in the development of the pupil's reading behavior? In view of the recorded miscues and the amount of corrective feedback to those miscues, there is a clear indication that the materials that pupils are being asked to read may be either too easy or too difficult for them. The low reading group, especially, makes a large number of oral reading miscues suggesting that they cannot handle the material well. What would happen to the interaction patterns in these reading groups if the level of difficulty of the materials read were lowered? Certainly one conclusion supported by these data is that much of the behavior recorded as criticism may be significantly reduced. What that would mean for the learners may only be speculated upon but surely there is some support for the conclusion that the move would be a positive one. These problems will be explored in greater detail in

the chapter dealing with the findings of the FIER analysis.

Category 10: Silence and Confusion--Silent Reading Behavior

The findings for the percentage of the total interaction that involved pupils reading silently are reported in Figure 5.4. The data suggest that there are differences across the teachers in the amount of silent reading in the groups and classes. While all the grade one teachers had pupils read aloud, only Teachers IV and V allowed for silent reading to any extent. While all the low groups in grade three read silently for a proportion of the time, there were differences across classes for the average and combined groups (from 0.0 to 12.2 per cent). The only conclusion supported by these findings is that the teachers seemed to be in less agreement about the role of silent reading in the group teaching situation than about oral reading. The finding also points up the fact that Category 10 involved other behaviors than silent reading.

Summary

These findings on the subscripted categories should be accepted very tentatively, since there was no reliability check on the categorizing of these behaviors. Despite that, however, the information gleaned has been presented by way of pointing up the need to account for the nature of the reading lesson in trying to understand the patterns of behavior observed. In reading classes, there is certainly evidence here that the patterns that did emerge in these classes were influenced by the reading group: the degree to which they were asked to read orally: and the degree to which they could meet the demands of that reading.

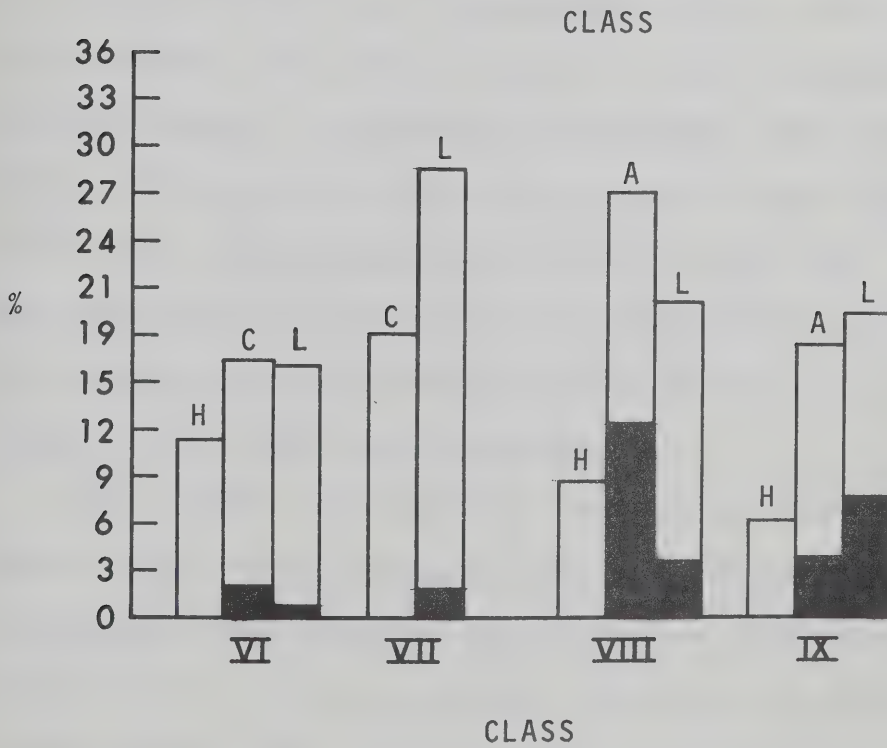
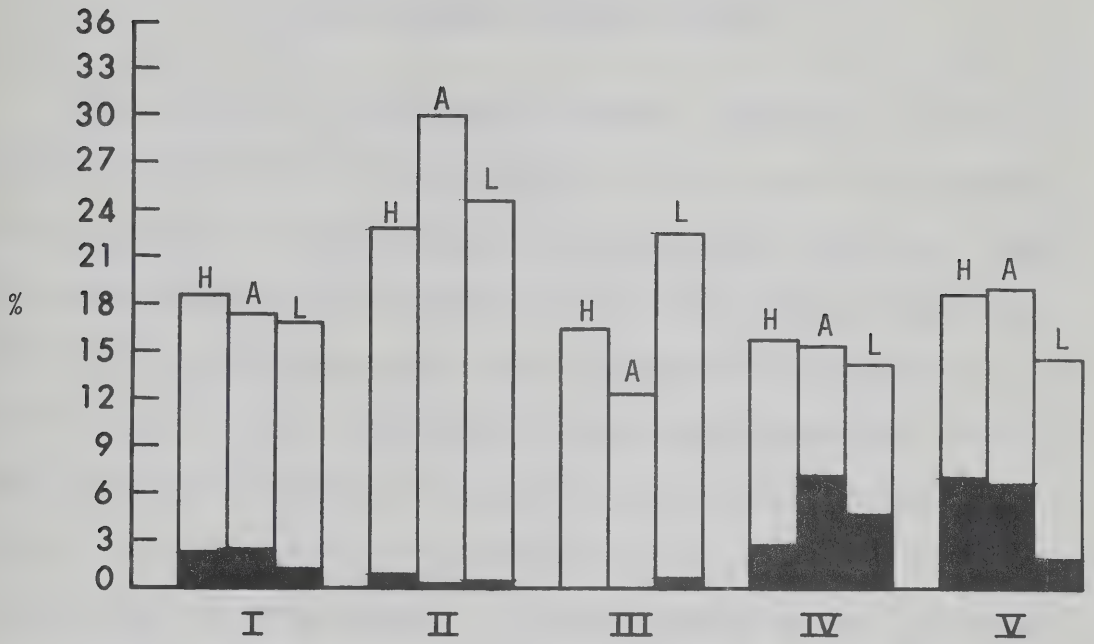


Fig. 5.4. Showing the proportions of Category 10 (Silence and confusion) accounted for by pupils reading silently for each reading group in each class

STABILITY OF THE VERBAL INTERACTION PATTERNS
OF THE DIFFERENT READING GROUPS

The analysis of the composite matrices (based upon the observations over four visits) showed that the verbal interaction patterns of the different reading groups were significantly different. Moreover, the discussion and interpretation of the various areas of the matrices have pointed up those behaviors which differentiated the observed groups. While many important points have been made, the most valid conclusion was that the patterns of interaction characteristic of the low reading groups were generally more direct than were those of the higher reading groups. In the low reading groups, the amount of criticism recorded was a distinguishing factor. Given Jackson's (1967) statement that there is a need to attend to the minutia of the observed behaviors in the classroom environment, one question which could not be ignored was whether or not the patterns of behavior indicated by the composite matrices prevailed day after day. That is, were the patterns discussed in the previous sections influenced most by the behavior observed during one of the visits, or did the patterns pertain over the daily reading lessons?

While ideally these questions should be explored by collecting samples of the verbal interaction from the different reading groups at different points throughout the school term, that procedure could not be followed in the present study. Therefore, while the technique is questionable, what is explored here are the patterns of interaction characteristic of the four individual observations.

In order to analyze the stability of the patterns of verbal

interaction from day to day, the matrices for the individual sessions were prepared and the Darwin chi square test was applied to determine the statistical differences if any, when the individual lessons were compared for each reading group.¹

The findings for the Darwin chi square analyses are summarized in Table 5.26, for each group in each class at the two grade levels. In some instances, less than four observations are compared reflecting the fact that teachers did not meet each reading group each day.

This analysis of differences across lessons from day to day suggests that the degree of lesson variability was specific to each class and was in some cases reflected in the group level. The verbal interaction in Class II was remarkably similar from day to day as was the interaction in Class VI where only lessons 3 and 4 for the low group were significantly different. In five of the classes (I, III, IV, VIII, IX) the lessons of the low group were more variable than the average or combined groups. In the case of the high group, the patterns varied not only as recorded, but by the fact that group meetings were not held during some of the observation periods. No verbal interaction in the group context would certainly qualify as a different pattern of interaction from those lessons where there was a group teaching session.

While lesson 1 did not stand out as different in all classes and all groups, it was cited as different from the other lessons more often

¹ It should be noted that these matrices did not meet one of Flanders' assumptions--that the matrix should consist of at least 400 tallies. Therefore, these data are presented for their interest, rather than their specific research value and should be interpreted very cautiously.

Table 5.26. Summary of the Levels of Significant Difference When the Individual Observation Sessions for Each Reading Group in the Nine Classes are Compared

Grade	Class	Observations compared					
		1-2	1-3	1-4	2-3	2-4	3-4
I	H	.004	NSD	.035	.001	NSD	NSD
	A	NSD	.001	NSD	NSD	NSD	NSD
	L	.001	.001	.001	.001	.001	.001
II	H	NSD	NSD	NSD	NSD	NSD	NSD
	A	NSD	NSD	NSD	NSD	NSD	NSD
	L	NSD	NSD	NSD	NSD	NSD	NSD
III	H	NSD	NSD	NSD	NSD	NSD	NSD
	A	.001	.001	.001	NSD	NSD	NSD
	L	.001	.001	.003	.002	.001	.003
IV	H	NSD	.001	NSD	.008	NSD	.001
	A	.027	.001	NSD	NSD	NSD	NSD
	L	.001	.001	.001	NSD	NSD	NSD
V	H	.039	.001	NSD	NSD	NSD	NSD
	A	NSD	.045	.001	NSD	.015	NSD
	L	.048	NSD	.014	NSD	NSD	NSD
VI	H	Group met only once					
	*C	NSD	NSD	NSD	NSD	NSD	NSD
	L	NSD	NSD	NSD	NSD	NSD	.003
VII	H						
	*C	.018	.001	.001	NSD	NSD	NSD
	L	NSD	NSD	.001	NSD	NSD	.001
VIII	H	Group met only once					
	A	.001	.001	NSD	.001	.015	.001
	L	.001	.001	NSD	.001	.049	NSD
IX	H	NSD	**	NSD	**	NSD	**
	A	NSD	.001	.018	NSD	NSD	NSD
	L	.001	NSD	.000	.001	.008	.003

* Combined high-average group

** No group meeting during the third observation

as indicated in Table 5.27.

Table 5.27. Showing the Frequencies with which the Lesson Comparisons were Statistically Different

	Lessons compared					
	1-2	1-3	1-4	2-3	2-4	3-4
# of lessons compared	24	23	24	23	24	23
# of lessons recorded as significantly different	12	13	11	7	6	7

A logical conclusion about these differences between the first and the other lessons might be that the verbal interaction was affected to some extent by the presence of the investigator. That not all groups were affected could reflect the point in the first lesson during which the group was met. That is, those groups met later in the first lesson might be less affected than those who were met first.

Interpretation of the Observed Differences in the Lessons

Since there were significant differences reported across the lessons for a number of groups in the first and third grade classes, a question was raised as to the nature of those differences. In order to explore those differences, albeit in a limited way, the I/D Ratios ($I/I+D$), the Revised I/D Ratios ($i/i+d$),¹ and the percentages of teacher-

¹ The ratios based upon the formulas $1,2,3,4/5,6,7$ and $1,2,3/6,7$ are reported in Appendix J.

pupil talk are reported for each lesson in Table 5.28, and are discussed in this section in terms of the reading groups in each class.

Class I. The I/D ratios suggest that the lessons of the high group tended to be more indirect over each of the four lessons. However, the Revised I/D ratios suggest that on two occasions, the teacher used more control. In the average group, the first and second lessons tended to be indirect, but in all lessons, the proportions of direct control and motivation were greater. Low group lessons were more variable with lessons 1 and 4 more indirect than lessons 2 and 3.

In this class then, there is less lesson variability characterizing the high groups, but the average and low group lessons did vary from day to day. In the case of the low group, the variability ranges from highly indirect to highly direct.

Class II. The most that can be said about Class II is that the patterns of interaction characterizing all groups are more direct than indirect and that there is almost no variability from lesson to lesson. Even within the limited range suggested by both the I/D Ratios and the Revised I/D Ratios there is some evidence that the patterns of interaction of the high group were more indirect each day compared with both the average and the low groups.

Class III. The I/D Ratios and the Revised I/D Ratios of the high group suggest more variability across lessons than was evident in either Class I or Class II. In this class, the pattern of interaction of the average group is most stable and most indirect across all lessons. But, an interesting difference in the average group is reflected in the differences in the Revised I/D Ratios which range from .458 to .778. In the third lesson, therefore, the indirect motivation behaviors ex-

Table 5.28. Summary of the I/D Ratios (I/I+D), the Revised I/D Ratios (i/i+d) and the Percentage of Teacher-Talk and Pupil-Talk for Each Observation Session by Each Reading Group in Each of the Classes

C l a s s	G r o u p	Observation 1			Observation 2			Observation 3			Observation 4		
		I/D	i/d	TT-PT	I/D	i/d	TT-PT	I/D	i/d	TT-PT	I/D	i/d	TT-PT
I	H	.590	.569	53-28	.538	.366	47-29	.557	.578	49-39	.537	.412	49-31
	A	.568	.445	52-28	.573	.490	56-34	.468	.426	43-42	.464	.398	49-27
	L	.682	.629	54-35	.408	.351	62-23	.392	.367	52-21	.617	.606	59-26
II	H	.219	.288	45-35	.200	.286	43-34	.240	.276	34-43	.191	.288	34-41
	A	.111	.086	26-40	.134	.147	37-32	.309	.267	35-45	.192	.127	36-34
	L	.154	.221	51-28	.151	.169	45-32	.130	.154	39-36	.156	.173	28-41
III	H	.440	.328	52-23	.552	.532	54-33	.608	.544	53-31	.298	.281	55-24
	A	.564	.633	71-20	.523	.778	74-19	.550	.458	59-29	.596	.510	53-31
	L	.358	.206	52-23	.599	.454	53-33	.367	.208	51-24	.462	.347	54-16
IV	H	.618	.621	58-26	.558	.369	54-24	.310	.234	52-43	.639	.50	55-26
	A	.547	.468	61-25	.543	.505	53-28	.328	.264	50-35	.605	.545	62-23
	L	.665	.443	57-24	.433	.275	56-37	.448	.339	54-31	.413	.322	58-31
V	H	.673	.507	51-36	.497	.378	49-30	.309	.307	49-24	.436	.267	47-36
	A	.450	.291	49-33	.426	.274	45-37	.474	.319	47-30	.420	.384	48-28
	L	.352	.308	55-33	.311	.266	52-36	.331	.288	50-34	.343	.279	49-35
VI	H	One Group Meeting Only - No Comparisons Possible											
	A	.424	.297	70-72	.630	.694	59-23	.623	.652	62-22	.585	.655	56-24
	L	.293	.322	59-24	.279	.300	53-28	.414	.260	47-38	.284	.331	50-35
VII	H	Group Did Not Meet Independently of the Average Group											
	A	.604	.761	52-39	.106	.250	50-23	.354	.576	55-21	.061	.000	57-18
	L	.538	.593	38-32	.254	.385	48-17	.418	.307	43-34	.454	.594	45-25
VIII	H	One Group Meeting Only - No Comparisons Possible											
	A	.584	.446	40-21	.670	.438	50-33	.460	.264	37-54	.666	.497	40-27
	L	.368	.314	47-29	.097	.130	37-41	.558	.358	45-34	.245	.231	42-28
IX	H				.546	.363	62-30	.485	.784	49-47	.238	.935	75-14
	A	.621	.580	49-27	.506	.596	68-29	.313	.299	57-26	.356	.755	72-19
	L	.323	.457	68-20	.548	.477	57-29	.485	.444	68-29	.540	.452	46-25

ceeded the direct control statements by a considerable proportion. This was the highest Revised I/D Ratio recorded for any group in any lesson at the first grade level.

The patterns of behavior in the low group like those of the high groups were more variable. In this class the teacher controlled more of the talk in the average group (53 to 74 per cent) compared to the high group (52 to 55 per cent) and to the low group (52 to 54 per cent). On those days when the highest percentages of talk were recorded for the average group, the Revised I/D Ratios were high, indicating that the teacher was engaging in extended motivation behaviors.

Class IV. Lesson 3 for the high group differed from the other lessons in that both the I/D and the Revised I/D Ratios suggest that the lesson was much more direct than were the other lessons compared. In this lesson, the pupils controlled more of the talk (43 per cent) compared with an average of about 25 per cent in the other lessons. Lesson 3 also differed for the average group and in the same direction in that the behavior pattern was more direct. Since the teacher was also fairly direct with the low group during Lesson 3, it is not impossible that this may simply have been an off day for the teacher and as a result she was more direct than usual.

It is also clear that the patterns of interaction characteristic of the low group tended to be more direct from day to day than those of the average and high groups.

Class V. In this class, the behavior during the first lesson was more direct than in any other lesson, especially for the high and average groups. In this class, it could be stated that it was the behavior in the first lesson that accounted for most of the difference observed

when the composite matrix for the high group was compared with those of the other groups. In terms of the other three lessons, the I/D Ratios of the high group were not that different from the average group. However, when the Revised I/D Ratios are examined there is some evidence that the teacher depended more upon the motivation behaviors with the high over the average group. The difference, however, was not great. In this class, too, we find that the patterns of interaction of the low group were more direct than indirect each day.

In terms of teacher and pupil talk, the proportions in all groups over all visits are very similar.

Class VI. There were no significant differences reported for the combined groups when the lessons were compared. As these data show, the lessons of the combined group tended to be indirect from day to day. The lessons for the low group also varied little and remained more direct from lesson to lesson. All the I/D and Revised I/D Ratios, for the low group, for example, were less than .50 each day.

Class VII. In this class, the first lesson with the high group was much more indirect than were the other lessons. In the fourth lesson, apparently no behavior was recorded in the motivation categories, suggesting that in this lesson the teacher may have spent most of the time lecturing to the group. There was some variability in the lessons of the low group, with lessons 1 and 4 more indirect than lessons 2 and 3. In three of the lessons, the Revised I/D Ratios were higher than the I/D Ratios suggesting that the direct behavior in this class reflected the teacher lecturing to students rather than utilizing the control behavior to any extent. Since this was also true to some extent in the patterns characterizing the combined group this is

obviously a pattern of behavior characteristic of this teacher. That is, while she controls much of the behavior by lecturing to students, she is also very positive in accepting and praising pupils' contributions.

Class VIII. The interaction in this class, at least for the low group, seems to reflect more the differences in the amount of teacher and pupil talk from day to day rather than differences in the I/D or Revised I/D Ratios. In the third lesson, the amount of pupil talk actually exceeded the amount of teacher-talk. It is very likely that in this lesson the pupils read aloud extended passages.

With the exception of lesson 3, the interaction patterns of the low group remained more direct than indirect through all the visits. Certainly, the low group lessons tended to be more direct than the average group lessons.

Class IX. Teacher IX relied heavily upon indirect motivation with the high group and the differences between the I/D and the Revised I/D Ratios suggest that she may have lectured to these students more than she questioned them about their work. There was considerable variability across the lessons for both the average and the low groups. With one exception, however, the behaviors characteristic of the low group were generally more direct than those of the average group.

Lesson 4 in this class deserves some special comment especially in view of the very high Revised I/D Ratio recorded for the high group (.935). While the teacher controlled 75 per cent of the talk during that lesson, apparently in her lecturing, she was being very positive in her attitudes towards the children's contributions. Since the Revised I/D Ratio for the average group reached .755 that day, one might

conclude that this too was one of those days, and a good one at that.

Summary. This has been a very cursory examination of the patterns of influence for each of the four visits, and necessarily so, because of the very limited behavior observed in each of the lessons for many of the groups. However, recognizing this limitation, the data have suggested that differences from lesson to lesson tended to some extent to be class specific. In Classes II and VI, for example, the patterns of all groups were very stable. At the least, what this means is that low group pupils in those classes tended to be characterized by direct patterns of influence from day to day compared to high groups who were somewhat more indirect in their patterns.

While there was considerable variability across some of the visits from class to class for the different reading groups, the evidence supports the conclusion that in the low groups the patterns of interaction were more likely to be more direct than those of the other groups, and this directness was characteristic of much of the day to day interaction.

There was also some suggestion that lesson 1 may have been influenced more by the presence of the observer than the other lessons. Later, in the analysis involving the application of the FIER, this information influenced the decision to delete the first observation session when a decision had to be made to modify the amount of verbal data to be analyzed.

SUMMARY

This chapter has presented the findings of the Flanders' Inter-

action Analysis of the affective dimensions of the verbal behavior between teachers and pupils in reading groups in the first and third grade. The analysis was concerned first with determining whether or not there were differences in the patterns of behavior observed in the reading groups, and second, to trace more specifically the nature of the observed differences. To that end, both statistical and descriptive analyses were used in the interpretation of the observed behavior.

The results of an attempt to subscript four of the original Flanders' categories in order to make the observed behavior more specific to the teaching of reading were also reported.

In order to offer some insights into the day-by-day stability of the patterns of behavior described in the general analysis, matrices based upon the behavior observed in the daily observation of the reading groups were also examined and compared.

The analyses revealed that there were statistically significant differences in the patterns of interaction observed in the reading groups. While teacher-pupil verbal interaction across classes at one grade level and across classes at the two grade levels varied, patterns related to the levels of the reading groups did emerge, suggesting that the ability and/or achievement levels of pupils in reading are reflected in the verbal interaction observed in the classroom. Moreover, while there were differences in the patterns observed from day to day, the differences across the reading groups tended to remain stable.

The analysis of the subscripted categories indicated that certain aspects of the verbal behavior characterizing the reading groups could be accounted for, in part, by the reading content of the lessons, thus

clearly indicating the need for the FIER analysis which is the subject of the next chapter.

CHAPTER 6

THE FOCUSED INTERACTION EPISODE IN READING: RATIONALE, DEVELOPMENT AND ANALYTICAL PROCEDURES

The review of the literature in reading revealed no observational scheme for the analysis of the content of the verbal interaction of teachers and pupils during reading lessons, that would account for the specific and changing reading-centered content of that verbal behavior. While there were studies reviewed which dealt with the kinds of questions asked in reading classes in the elementary grades (Guszk, 1967; Bartholome, 1969), and purely descriptive accounts of what goes on in reading classes (Chall, 1967; Chall and Feldman, 1966), only one study by Haffner and Sloblodian (1969) reported an analysis of the reading lesson as an interactive process using a specially devised instrument specific to the teaching of reading. That study was criticized earlier (p. 57) on the grounds that the categories identified were too broad to discriminate the differential content of the verbal behavior observed. Thus, in order to describe the content of the verbal behavior of teachers and pupils during reading lessons with different reading groups, the first task was the development of an analytical system for that purpose. In the sections that follow, the steps taken in the development and subsequent application of the analytical technique used in this study, the Focused Interaction Episode in Reading (FIER), will be described.

BACKGROUND TO THE DEVELOPMENT OF THE FIER INSTRUMENT

In attempting to develop an observational scheme appropriate for the analysis of the content of teacher-pupil verbal interaction in reading lessons, the writer began by examining the literature concerned with the analysis of classroom verbal interaction and reports of the different approaches that have been taken to examine the content of observed classroom verbal behavior. Since the present study would concentrate upon the analysis of reading lessons, literature concerned with the processes involved in learning to read and general descriptions and prescriptions for the teaching of reading were also examined.

The purpose of this initial exploration of the literature was to identify a structural framework for an instrument suitable for the descriptive analysis of the content of the verbal behavior one might expect to observe during the teaching of reading. Recognizing that any such a priori instrument would undoubtedly require considerable revision, what was sought first was an open-ended system that would serve primarily as a means for the logical ordering of the interaction elements of teacher-pupil verbal behavior in reading.

The study which most influenced the logical framework arrived at for the initial system was that of Bellack and his colleagues (1966). While Bellack's complete system was not incorporated into the initial FIER instrument, selected categories from the system were.

Using verbal data collected in high school social science lessons, Bellack identified the verbal actions of students and teachers in terms of four pedagogical moves: structuring, soliciting, responding, and

reacting. These four pedagogical moves constituted a teaching cycle which was observed many times over in the classrooms studied. The teaching cycle

...begins either with a structuring or with a soliciting move, both of which are initiating maneuvers; they served the function of getting a cycle under way. In contrast, responding and reacting moves are reflective in nature; they are either solicited or occasioned by a preceding move and therefore cannot begin a cycle. A cycle frequently begins, for example, with a soliciting move by the teacher in the form of a question, continued with a responding move by the student addressed, and ends with an evaluative reaction by the teacher. A cycle might also get under way with a structuring move by the teacher in which he focuses attention on the topic to be discussed, continues with a question related to the topic, and ends with responding moves by one or more students (p. 5).

In developing the initial FIER instrument, three of the four pedagogical moves (teacher solicitations, pupil responses and teacher reactions) were incorporated into a unit identified as an episode, following Waiman's (1962) use of the term (Chapter 2, p. 11).

The focus of the episode would be those solicitations, responses, and reactions specific to the teaching of reading. Thus, in terms of the solicitation behavior, the question would be, what is it that teachers ask pupils to do during the teaching of reading that would ostensibly be aimed at the improvement of pupils' reading abilities? Initially, it was anticipated that questions on the reading would be asked; pupils would be asked to read; and that pupils would be asked to perform certain other actions.

In terms of pupil responses, the question would be, what types of responses do pupils make to teachers' reading-centered solicitations? Was the pupil able to respond to the solicitation, and if he did respond, was his response congruent with the intent of the solicitation? Essentially, then, responses could be identified as correct,

incorrect, or partly correct. Reading miscues in oral reading responses would also have to be identified and analyzed.

In terms of teacher reactions, the question would be, how do teachers react, if at all, to pupil responses to their solicitations? It was assumed that at the most general level, the teachers might either react in a corrective manner or that they might confirm the acceptability of the pupil's response. It had also to be recognized that a reaction may call for a further pupil response, either to extend the contribution of the pupil or to try to get the pupil to correct or revise a response that was not acceptable in terms of the teacher's perception of the solicitation.

It is important to recognize that the episode was to be specific to the examination of the verbal interaction between the teacher and the pupil who had been identified in some way as the respondent. In other words not all the verbal behavior observed in the reading lesson would be examined. In the light of Bellack's pedagogical moves, what was missing were the teacher structuring behaviors. While structuring behaviors are undoubtedly important and a more comprehensive system would account for them, it was assumed that much could be learned by focusing upon the behavior which was clearly interactive. Since the solicitation, response, and reaction behaviors involve teacher-pupil interaction, these were the general behavior categories first considered for the FIER analysis.

Another reason for concentrating upon the episode as defined was that much of the behavior observed in reading classes was assumed to revolve around the dyadic relationship established between the teacher and a specific pupil at specified points in time. While one might spe-

culate that the rest of the class or group benefit from the dyadic exchange so common in most classes, there is no clear cut way of determining what those benefits might be, if any. Finally, it could be said that the episode made it possible to concentrate upon the content of the reciprocal response-reaction sequences between teachers and pupils, thus pointing up more effectively the different kinds of exchanges taking place when the pupils had previously been identified as high, average, and low achievers in reading.

To summarize, the initial formulations resulted in the development of an instrument that would identify the verbal acts of teachers aimed at soliciting responses from pupils which may or may not result in a teacher reaction. In anticipation that there would be some instances of a reciprocal relationship between the pupil responses and the teacher reactions, the system was designed to account for that reciprocal interaction. The basic understanding was that the content specifications of these general behaviors first identified would be open to modification on the basis of the evidence of the content of the verbal behavior in the classrooms observed in the investigation. In other words, the final categories of behavior in the descriptive-analytical instrument would be determined, modified, and/or extended, once the teacher-pupil verbal behaviors from the classes were available for examination.

Description of the Initial FIER Instrument

The a priori logically derived content analysis system first developed upon the principles discussed above is reproduced in Figure 6.1. The description of the three pedagogical moves comprising the episodes

Date _____
Time _____
Class _____
Group _____
Individual _____

FILE CODING CATEGORIES¹

SOLICITING BEHAVIOR

<p>(attempts)</p> <p>TARGET--Gr. <input checked="" type="checkbox"/> _____ Ind. <input checked="" type="checkbox"/> _____</p> <p>² NATURE--Req. _____ Dnd. <input checked="" type="checkbox"/> _____</p> <p>TYPE--Ques. <input checked="" type="checkbox"/> _____ Read. _____ Act _____</p>	→	<div style="border: 1px solid black; padding: 5px; width: 100px; margin: 0 auto;">PUPIL FAILURE TO RESPOND</div>	→	<p style="text-align: right;">(attempts)</p> <p>Pass one _____ Prompting <input checked="" type="checkbox"/> _____ Discipline _____ Gr. Censor _____ Ind. Help _____ Example _____ Discussion _____ OTHER _____</p>
<p>unison _____</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin: 0 auto;">PUPIL ATTEMPTS TO RESPOND</div>			→	<p>Pupil Attempts to Comply <input checked="" type="checkbox"/> _____ other _____</p>

Questions and Acts

Correct _____
Partly C. _____
Incorrect _____

Reading: Miscues

<p>(attempts)</p> <p>Semantic Sub. _____ Linguistic Sub. _____ Substitution <input checked="" type="checkbox"/> _____ Mispronunciation _____ Refusal _____ Omission _____ Reversal _____ Regression <input checked="" type="checkbox"/> _____ Intonation _____</p>	<p>OTHER _____ _____ _____ _____</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------

↓

TEACHER
REACTION

<p><u>Confirming Behavior³</u> (attempts)</p> <p>Minimum confirmation _____ Extended confirmation _____ Minimum praise <input checked="" type="checkbox"/> _____ Extended praise _____ Repetition _____ With extension _____ Group praise _____ Qualified Acceptance _____ OTHER _____</p>	<p><u>Corrective Behavior</u> (attempts)</p> <p>None <input checked="" type="checkbox"/> _____ Delayed _____ Prompt _____ Rephrase Ques. _____ Suggests Wd. Att. <input checked="" type="checkbox"/> _____ Discussion _____ Asks Other _____ Asks Group _____ Discipline _____ OTHER _____</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

¹ All specific behaviours subsumed under each category will be listed separately.

² Question types will be coded according to the Guszak categories.

³ Negative instances will be code N--Eg. minimum praise X would read minimum reproof.

Fig. 6.1. The 'a priori' logically derived preliminary FIER instrument

are described in this section.

Teacher solicitations. Three kinds of soliciting statements were accounted for in the prototype instrument. It was assumed that teachers would ask questions about the reading content, that they would ask pupils to read aloud, and that they would ask pupils to perform certain actions. Each of these three basic types of solicitations could then be further differentiated during the actual coding process. For example, the questions asked would be identified according to the question types discussed by Guszak (1967). The record form as shown in Figure 6.1 is set up in order that the question category may be identified numerically by the numbers 1 through 6 as these correspond to the six types of questions in reading described by Guszak. In designating an oral reading solicitation, a number corresponding to the specific content of the oral reading solicitation would be used once the specific types of oral reading solicitations were determined from the observed behavior. It was expected that these categories would signify the different purposes expressed in the oral reading solicitations. It should be noted that if a pupil were asked a question which required that he read aloud his response, the solicitation would be identified as a 1 type question and would refer to Guszak's Recognition category (Pupil responds to a question by reading aloud his answer). Identification of the specific non-verbal responses solicited were to be left to evidence gathered from the observed behavior.

Pupil responses. The initial pupil response categories identified in the first instrument accounted for the possibility that a pupil might either attempt to comply with the soliciting behavior or might fail to comply. By indicating that the pupil failed to respond, the

teacher's reaction to that failure could be examined. Several possible teacher reactions to the pupil's failure to respond are indicated on the forms, including the possibility that the teacher might simply leave that pupil and move on to another. If the teacher reaction to failure succeeded in that the pupil did try to respond, then the subsequent behavior of the pupil could be treated as a response and analyzed as below.

Pupils' attempts to respond were to be analyzed diagnostically, in that problems in answering questions, or oral miscues in reading would be noted on the record form in the appropriate place. It was assumed that not all errors or miscues would necessarily prompt a reaction from the teacher, for sometimes the teacher might deliberately withhold her reaction to allow a pupil time to correct himself. (Of course, no reaction might also indicate that the teacher was unaware of an error in the first place.) The anticipation of these different possibilities for pupil responses posed some problems in designing the record form format for pupil responses. For example, assuming that the teacher might delay her reaction, a record was needed of the original error or miscue so that any subsequent reaction could be related back to the original response.

The diagnostic basis for the analysis of pupil miscues was considered especially necessary, for then a record could be kept which would allow for different insights into the specific teacher reactions in relation to the specific miscues. The rationale for the specific categories was derived from reading research on the diagnostic analysis of children's reading responses, with the miscue categories selected being influenced mainly by Goodman's (1969) analysis of children's mis-

cues in reading. While it is conceded that the greater the number of categories, the more specific the knowledge gained, the number of specific categories of miscues was arrived at arbitrarily, but with consideration being given to what the observer might handle in the analysis of the large amount of data that would be examined in the study. The miscue categories, therefore, were deliberately delimited. Of course, if further differentiation proved necessary, the appropriate steps would be taken to increase the number of categories.

Teacher reactions. The categories for recording teacher reactions to pupil attempts to respond were left relatively undeveloped in the initial system, on the grounds that identification of the teacher reactions would constitute one of the major areas specifically researched in the study. To put it another way, it was the challenge of identifying teachers' corrective reactions to pupil errors that gave direction to the early development of the instrument, in that the format of the instrument was designed to allow for a record of the flow of different response-reaction cycles of behavior during a single episode.

One deviation in the limits imposed on the episode should be noted. While the episode would focus upon the teacher soliciting a response from an individual pupil, the investigator's experience in primary reading lessons suggested that sometimes the teacher might solicit responses from a group of pupils. Such responses seldom allow for the teacher to be cognizant of the contributions of individual pupils, whether they are right or wrong, or are even answering, and are therefore often looked upon as an unsatisfactory classroom behavior pattern. Since there is little information on the prevalence of this

behavior, it was decided that the present analysis could be modified to allow for a record of the behavior in the classes observed without seriously distorting the intention of the FIER system.

The initial instrument also allowed for the identification of the class, the group, the visit, and an identification number for the episode itself. The target of the solicitation or how the pupil respondent was identified and the nature of the solicitation as a request or demand could also be recorded. One coding sheet would be used to code the behavior as it occurred within the specification of one episode. The coding sheet shown in Figure 6.1 includes a set of hypothetical numbers which show how the form was intended to be used. In looking at the hypothetical interaction recorded there, we find that the target of the solicitation appeared to be the group but that the teacher then identified one specific pupil as respondent. The solicitation was of a demand nature and was a question type based on the reading content of the story and called for a read answer (as signalled by the number 1--Recognition question type). The pupil apparently failed to respond to the solicitation and the teacher prompted him with a statement such as, "take your time and try to find the answer." This prompting statement had a positive effect and the child began to read the correct answer. In reading the answer, however, he made two miscues. The first was a regression and brought forth no response from the teacher. The second miscue was a substitution and the teacher reacted by suggesting that the pupil look at the first sound in the word. Following the completion of the response, she confirmed that his response was acceptable with the statement "good".

This, then, was the basic initial instrument and how it was in-

tended to be used. Its validity was determined on the basis of the reactions of reading specialists who accepted it as a working instrument, open to further development on the basis of evidence from actual classroom observation of the verbal behavior of teachers and pupils during reading lessons. That it was developed in part from previous research in the content analysis of teacher-pupil interaction and drew upon studies of teacher behavior and pupil behavior during the teaching of reading was also accepted as face validity for the instrument.

Thus far, the logical basis for the initial FIER instrument has been discussed. Furthermore, the point has been stressed that the a priori instrument would be open to modification on the basis of observed behavior. In the next section, the specific steps taken in the first revision of the instrument are discussed. The data for the revision consisted of the anecdotal records and the verbatim transcripts of the teacher-pupil verbal behavior observed in the classrooms visited.

Description of the First Revision of the FIER Instrument

It is significant that by the time the investigator came to revise the FIER instrument, she was very familiar with the teacher-pupil verbal interaction data from the observed classes, having been present during each observation, having typed and verified most of the transcripts, and having listened to the tapes once again to complete the Flanders' Interaction Analysis of the behavior. Throughout this immersion, and it could hardly be called anything else, the revision of the FIER instrument was constantly in mind, and many ideas were recorded and considered as they came to the investigator's attention. What became especially clear was the need to find an orderly, systematic means

for coping with the large amount of data available in the written transcripts.

It must be admitted that the most formidable problem was where to begin. While the information gleaned through informal observation of the data proved useful in subsequent revisions, an initial, somewhat haphazard revision of the instrument on that basis was rejected. Eventually one scheme for the orderly identification of the observed behavior patterns emerged. The idea hit upon was to go through the typewritten transcripts and to identify each solicitation, response, and reaction sequence by a specific color coding scheme. An example of a color coded page from the transcripts is included in Appendix K. The sample shows that teacher solicitations were coded in one color and teacher reactions were coded in another color. Non-soliciting--non-reacting behavior is left uncolored. Pupil responses were coded by four colors to identify (1) a response in the words of an individual pupil; (2) a read response; (3) a unison or group response; and (4) an unsolicited pupil statement. The color coding, while tedious, proved invaluable in determining immediately the complex nature of certain episodes and clearly brought out certain limitations in the original instrument. Notes were kept during the color coding process and these served as the basis for the first revision of the FIER instrument. That instrument is reproduced in Figure 6.2.

Several points should be noted. First, the color coding lent confidence to the decision to stick with the episode as the basic unit of analysis, and that the three pedagogical moves were sufficient identifiers of the global behavior of teachers and pupils as they interacted verbally during reading lessons. The major changes from the first

FIERCODING CATEGORIES SHEET

Id. ____ Cl. ____ Gr. ____ Ind. ____ Mat. ____

TEACHER SOLICITATIONS

TEACHER REACTION

Target 1 2 3

Nature 1 2

Type: ?? story context _____
 ?? pic. context _____
 ?? general info. _____
 + pers. exp. _____
 Reading - NO ?? _____
 Apply wd. attack _____
 skills _____
 Word knowledge _____
 Directed exercise _____
 Other _____

Prompt _____
 Directive _____
 Reprimand _____
 Criticism _____
 Help _____
 T. Ans. _____
 Ignore _____
 Pass on _____
 Other _____

NO
PUPIL
RESP.

Pupil Attempts to Comply ____

PUPIL RESPONSE

Caller 1 2

Correct _____
 Incorrect _____
 Incomprehensible _____
 Incorrect _____

UNISON 1 2
 Incorrect 1 2
 Correct 1 2

Miscues:

Refusal _____
 Mispron. _____
 Omit _____
 Subst. _____
 Ling. _____
 Sem. _____
 Regress _____
 Intonation _____
 Phrasing _____
 Self. Corr. _____

Other _____

 Interruptions _____
 Caller _____

TEACHER REACTIONS

Confirming

Corrective

Min. Confirm. _____
 Ext. Confirm. _____
 Min. Praise _____
 Ext. Praise _____
 Repetition _____
 Group Praise _____
 Rewording _____
 With lecture _____
 Other _____

None _____
 Denial _____
 Reprimand _____
 Help _____
 Criticism _____
 Pass on _____
 Competition _____
 T. Ans. _____
 Apply wd. att _____
 gen. _____
 spéc. _____
 Repetition _____
 Other _____

Fig. 6.2. First revised FIER instrument

to the second instrument were in the categories within each of the pedagogical moves. Most of these were extensions of the number of sub-categories necessary to describe more specifically what was going on during the verbal interaction in the reading lessons. In comparing the two forms of the instrument, therefore, we find the following revisions.

Teacher solicitations. Figure 6.3 includes the two sets of categories from the initial FIER instrument and the first revision of the FIER instrument.

The most obvious difference in the two systems is that the number of solicitation categories has been extended.¹ The observed behavior showed that teachers were asking pupils to respond to many different solicitations which could not be examined adequately within the framework of the three solicitation types originally identified. Furthermore, it was obvious that a descriptive analysis of verbal interaction during reading would have to account for more specific types of solicitations, especially as they might affect pupil responses. It was also possible that a finer differentiation of solicitation types would be more likely to point up differences in the content of the verbal interaction in the different reading groups. The description of these specific solicitation categories is left for the discussion of the final draft of the instrument. Each is also described in detail in the complete description of the final coding scheme in Appendix L.

¹ The need to extend the number of solicitation categories had been predicted in the cursory review of the interaction in the classes visited in the pilot study.

FIER: Preliminary Solicitation Categories

(attempts)

TARGET--Gr. _____

Ind. _____

NATURE--Req. _____

Dnd. _____

TYPE--Ques. _____

Read. _____

Act. _____

unison _____

FIER: Revised Solicitation Categories

Target 1 2 3
Nature 1 2

Type: ?? story context _____

?? pic. context _____

?? general info. +
pers. experience _____

Reading - NO ?? _____

Appl. wd. act.
skills _____

Directed exercise _____

Other _____

Fig. 6.3. Comparison of the solicitation categories from the original and the first revised FIER instrument

The target category was coded for three possible variations. The "1" would indicate that a unison response was solicited; the "2" would indicate that an individual pupil was identified as respondent; and the "3" would indicate that the solicitation was opened to the group, then the teacher identified the pupil respondent. The categories for the nature of the solicitation were also changed. Two specific aspects were considered. Code 1 would indicate that the teacher was calling for a response, while Code 2 would identify the language of the teacher as apparently leaving the pupil the choice in responding to the solicitation. For example, Code 2 would be used when the teacher would preface her remarks with "Would you like to," "Do you want to," "What do you think," and so on, when, in effect, whatever the language form, the teacher was issuing a directive to get the pupil to respond.

Pupil Failure to Respond: Teacher Reaction

The two sets of categories for the initial and first revised instruments are compared in Figure 6.4.

The initial categories were extended and in some cases renamed on the revised form. Reprimand replaced discipline while directive and teacher answer were added. The intention was to code criticism as a "1" if it came from the teacher, and a "2" if it came from the group. Reprimand and criticism were differentiated on the basis of the length of the teacher statement, with reprimand being a short statement directed at the immediacy of the act ("You were not listening"), and as a "2" when the statement involved extended criticism with an indication that the pupil always had problems ("You never listen, and

FIER: Preliminary Reaction to Failure Categories

	(attempts)
Pass on	_____
Prompting	_____
Discipline	_____
REACTION Gr. Censor	_____
Ind. Help	_____
Example	_____
Discussion	_____
Other	_____

FIER: Revised Reaction to Failure to Respond Categories

Prompt	_____
Directive	_____
Reprimand	_____
Criticism	_____
Help	_____
T. Acts.	_____
Ignore	_____
Pass on	_____
Other	_____

← Pupil Attempts to Comply __

Fig. 6.4. Comparison of the teacher reaction to failure categories from the original and the first revised FIER instrument

you never know what to do").

Pupil response: Attempts to comply. As the comparison below shows (Figure 6.5) there were few changes in the categories between the two forms, with the exception of the addition of "incomprehensible" and "self-correction."

Teachers' Reactions. The categories of behavior identified as teacher corrective reactions were extended in the first revised form to make the identification of the behaviors more explicit and to identify better those behaviors meant to serve as corrective behavior in relation to a pupil miscue. The two category systems are compared in Figure 6.6.

Further to these revisions, it was apparent that some adjustments would have to be made in the recording technique proposed in the development of the preliminary and first revised instrument. The decision on the specific changes were reserved for the second revision of the coding scheme.

Description of the Second Revised FIER Instrument

Once the first revision of the FIER instrument was completed, copies of the instrument were run off using a ditto-master technique, making copies available for a preliminary analysis of the color coded transcripts. Two observers, independently, analyzed a sample of 200 episodes drawn from the data. Once this coding was completed, each episode analyzed was discussed, and records of changes needed in the instrument were compiled.

The application of the instrument revealed a number of inadequacies basic to the second revision as reproduced in Figure 6.7. While

FIER: Preliminary Pupil Response Categories

Questions and Acts

Correct	— — —
Partly C.	— — —
Incorrect	— — —

Reading: Miscues

Semantic Sub.	— — — — —
Linguistic Sub.	— — — — —
Substitution	— — — — —
Mispronunciation	— — — — —
Refusal	— — — — —
Omission	— — — — —
Reversal	— — — — —
Regression	— — — — —
Intonation	— — — — —

FIER: Revised Pupil Response Categories

Correct	— — — — —
Incorrect	— — — — —
Incomprehensible	— — — — —
Partly Incorrect	— — — — —

Miscues:

Refusal	— — — — —
Mispron.	— — — — —
Omit	— — — — —
Subst.	— — — — —
Ling.	— — — — —
Sem.	— — — — —

Regress	— — — — —
Intonation	— — — — —
Phrasing	— — — — —
Self Corr.	— — — — —

Fig. 6.5. Comparison of the pupil response categories from the original and the first revised FIER instruments

FIER: Preliminary Teacher Reaction Categories

Minimum confirmation	—	—	—	—
Extended confirmation	—	—	—	—
Minimum praise	—	—	—	—
Extended praise	—	—	—	—
Repetition	—	—	—	—
With Extension	—	—	—	—
Group praise	—	—	—	—
Qualified acceptance	—	—	—	—
OTHER	—	—	—	—

(Confirming)

None	—	—	—	—
Delayed	—	—	—	—
Prompt	—	—	—	—
Rephrase Ques.	—	—	—	—
Suggests Wd. Att.	—	—	—	—
Discussion	—	—	—	—
Asks other	—	—	—	—
Asks group	—	—	—	—
Discipline	—	—	—	—
OTHER	—	—	—	—

(Corrective)

FIER: Revised Teacher Reaction Categories

Min. Confirm.	—	—	—	—
Ext. Confirm.	—	—	—	—
Min. Praise	—	—	—	—
Ex. Praise	—	—	—	—
Repetition	—	—	—	—
Group praise	—	—	—	—
Rewording	—	—	—	—
With lecture	—	—	—	—
Other	—	—	—	—

None	—	—	—	—
Denial	—	—	—	—
Reprimand	—	—	—	—
Help	—	—	—	—
Criticism	—	—	—	—
Passon	—	—	—	—
Competition	—	—	—	—
T. Ans.	—	—	—	—
Apply wd. att.	—	—	—	—
gen	—	—	—	—
spec	—	—	—	—
Repetition	—	—	—	—
Other	—	—	—	—

Fig. 6.6. Comparison of the teacher reaction categories from the original and the first revised FIER instrument

Cl. _____ Gr. _____ Ind. _____ I.D. _____

I. TEACHER SOLICITATION

Type _____

A. TARGET

1 2 3 4 5

B. NATURE

1 2 3 4

C. TYPE

1. ?? on reading _____
2. ?? on picture _____
3. Silent reading _____
4. Oral reading _____
5. General info. _____
6. Peers exp. _____
7. App. wd. att. _____
8. App. loc. _____
9. Controlled error _____

OTHER _____

IIb. PUPIL FAILURE

TO
RESPOND → →

1 2 3

IIIa. TEACHER REACTION

1. Encourages _____
2. Prompts _____
3. Reprimand _____
4. Dir. cue _____
5. Repeats sol. _____
6. Rewords sol. _____
7. Suppl. sol. _____
8. Call on group _____
9. Teacher ans. _____
10. PASSES ON _____

OTHER _____

IIb. PUPIL RESPONSE

ORAL READING Length of Passage _____

Total Errors _____

Identifies passage 1 2

Miscues

- | | 1 | 2 | 3 | 4 | 5 |
|------------------|-------|-------|-------|-------|-------|
| 1. Hesitates | _____ | _____ | _____ | _____ | _____ |
| 2. Mispronun. | _____ | _____ | _____ | _____ | _____ |
| 3. Sub. - ling. | _____ | _____ | _____ | _____ | _____ |
| 4. - sem. | _____ | _____ | _____ | _____ | _____ |
| 5. - oth. | _____ | _____ | _____ | _____ | _____ |
| 6. Omission | _____ | _____ | _____ | _____ | _____ |
| 7. Regress | _____ | _____ | _____ | _____ | _____ |
| 8. Self corr. | _____ | _____ | _____ | _____ | _____ |
| 9. Teacher react | _____ | _____ | _____ | _____ | _____ |

OTHER _____

VERBAL RESPONSES

- | | 1 | 2 | 3 |
|-------------------------|-------|-------|-------|
| 1. Congruent (corr.) | _____ | _____ | _____ |
| 2. Congruent (incorr.) | _____ | _____ | _____ |
| 3. Congruent (p. corr.) | _____ | _____ | _____ |
| 4. Incongruent | _____ | _____ | _____ |
| 5. Tangential | _____ | _____ | _____ |
| 6. Incomprehensible | _____ | _____ | _____ |

OTHER _____

IIIb. TEACHER REACTION

READING CORRECTIVE

- | | 1 | 2 | 3 | 4 | 5 |
|--------------------|-------|-------|-------|-------|-------|
| 1. None | _____ | _____ | _____ | _____ | _____ |
| 2. Teacher ans. | _____ | _____ | _____ | _____ | _____ |
| 3. Ind. misc. | _____ | _____ | _____ | _____ | _____ |
| 4. App. gen. N.A. | _____ | _____ | _____ | _____ | _____ |
| 5. App. spec. N.A. | _____ | _____ | _____ | _____ | _____ |
| 6. Reprimand | _____ | _____ | _____ | _____ | _____ |
| 7. Reread | _____ | _____ | _____ | _____ | _____ |
| 8. Punctuate | _____ | _____ | _____ | _____ | _____ |
| 9. Directive cue | _____ | _____ | _____ | _____ | _____ |
| PASS ON | _____ | _____ | _____ | _____ | _____ |

OTHER _____

NON-READING CORRECTIVE

- | | 1 | 2 | 3 |
|------------------|-------|-------|-------|
| 1. None | _____ | _____ | _____ |
| 2. Denial | _____ | _____ | _____ |
| 3. Directive cue | _____ | _____ | _____ |
| 4. Repeats? | _____ | _____ | _____ |
| 5. Repeats res. | _____ | _____ | _____ |
| 6. Asks repet. | _____ | _____ | _____ |
| 7. Add info. | _____ | _____ | _____ |
| 8. Exp. error | _____ | _____ | _____ |
| 9. Yes, but | _____ | _____ | _____ |
| 10. Self corr. | _____ | _____ | _____ |
| 11. Reprimand | _____ | _____ | _____ |
| 12. Group | _____ | _____ | _____ |

OTHER _____

CONFIRMING

- | | | |
|-------|---------------------------------|-------|
| _____ | 1. Min. confirmation | _____ |
| _____ | 2. Min. praise | _____ |
| _____ | 3. Repeats response | _____ |
| _____ | 4. Adds info. | _____ |
| _____ | 5. Encourages ext. resp. | _____ |
| _____ | 6. Asks another question | _____ |
| _____ | 7. Expands upon idea | _____ |
| _____ | 8. Invites expansion from other | _____ |
| _____ | 9. None | _____ |

Fig. 6.7. Second revised FIER instrument

some categories were changed the major modifications were in the coding priorities. For example, in attempting to use the instrument to record pupil responses in juxtaposition to teachers' reactions, the scheme had to be modified further to account for multiple reactions from teachers. That is, teachers often made several specific statements within the context of the reaction, each of which needed to be analyzed and recorded. The simple checking process was inadequate for this purpose so some other scheme had to be devised. The main point was to insure a record of the overall sequence of behaviors observed. That is, the teacher might first deny (No!) that a response was acceptable, then criticize the pupil for not attending, and then immediately call upon another pupil to respond. In order to account for these multiple reactions, it was decided to code the reactions sequentially, within the same column by identifying their appearance by 1, 2, 3 and so on. Figure 6.7, which is coded hypothetically, shows this procedure.

Keeping the record straight as to what part of the response the teacher was reacting to at a specific point also posed a problem, especially when a teacher would engage in soliciting behavior that questioned the pupil on the content of what was read but required a reading response. In this sense, the response had two dimensions, that of identifying the content passage, and that of reading the passage. In order to specify what the teacher's reactions were aimed at, the "content" and/or the "oral reading act," the decision was made to provide two sets of categories for the identification of teachers' corrective reactions within which the specific types of corrective reactions elicited by oral reading and non-reading (open) responses could be separately categorized and recorded. The confirming categories were

found to be generalizable to both types of responses, but the coding procedures needed to allow for separate identification in relation to the read and/or open response of the pupil. Therefore, each pupil response and teacher reaction sequence was numerically ordered to a maximum of ten for the oral reading response, and a maximum of six for the open or non-reading component of the response. By separating the teacher's reactions in relation to these two, it was thought possible to keep an accurate record of the specific corrective behavior of the teacher in direct relation to the nature of the pupil response.

The open response categories were extended to account for the congruency of a response. Initial exploration of the data suggested that pupils gave incorrect responses quite unrelated to the teacher solicitations, whereas in other instances the incorrect response would at least fit the intent of the solicitation. The tangential category was added to handle those instances where the pupil would respond in such a way that the information or answer given would not quite meet the intention of the solicitation. Instances where pupils would add irrelevant information which would distort their responses would also be categorized as tangential.

The source of correction categories (self, teacher, none) were added to provide a record of the success of the teacher corrective behavior. For example, if the teacher did not react there was the possibility that the child would self-correct. If the teacher reacted in any way other than actually giving the correct answer, there was the question of whether or not the corrective reaction was successful.

The length of oral reading passages exceeding three words could also be recorded, as could the actual number of recorded miscues. It

was anticipated that this information might prove useful in considering the difficulty of any materials read by different reading groups. That is, the number of miscues would be of greater significance if it was known that the passage read was seven words in length or 50 words in length.

THE FINAL REVISED FIER INSTRUMENT

When the second revision of the instrument was completed its obvious failure to account for observed behavior falling outside the unit of the episode raised many doubts in the mind of the investigator. If the intention of the study was an in depth analysis of teacher-pupil verbal interaction during reading, one had only to flip through the color-coded transcripts to realize that there were blocks of behavior unaccounted for in the analysis.

Two possibilities were open. The first was to be content with the vast amount of information that could be made available through the use of the instrument in its revised form. The second was to find a way, within the framework of the proposed scheme, to account for the non-FIER behavior. In line with the overriding purpose of an in depth study, the latter was decided upon. That is, some scheme for recording the non-FIER behavior would have to be devised. Also, whatever categories might be used, the plan would have to allow for the identification of the episode at the point in the lesson when it occurred.

Once again the literature concerned with the analysis of classroom interaction was examined. The intention was to draw upon categories of behavior identified in previous studies. Unfortunately, while

many clues about what to look for were suggested in the literature, the category designations were eventually made specific to the data in the present study. One reason for this was the differences in the terms used by other investigators. Even if terms drawn from the literature had been used this would not have insured their transferability. The result of this procedure was the inclusion of part one of the FIER coding sheet as shown in Figure 6.8. By adding a section that would indicate the occurrence of non-FIER behavior on the coding sheet, not only could the behavior be identified but the point at which it transpired in the lesson would also be assured.

The final form of the FIER coding scheme, the one used in the analysis, consisted of three parts. Part one includes the various categories for the identification and description of the non-FIER verbal behavior occurring during the teaching of reading. These include various categories of teachers' structuring behavior during reading lessons and behavior aimed at controlling pupils, including disciplinary action. The section also includes a series of categories for recording and describing attempts by pupils to initiate interaction with the teacher.

Part two includes the various categories for identifying the context of the episode and also includes a place to record an identification number corresponding to the class, the visit, the group, and the lesson type. The identification number indicates exactly where in the lesson the episode occurred and makes it possible to return to the original raw data with no difficulty, since each episode was identified numerically in the transcripts themselves as described in the next section.

PART ONE: NON-FIER BEHAVIOR RECORD

I. TEACHER STRUCTURING BEHAVIOR

1. Procedural

1

2

3

2. Directions

1

2

3

3. Dictation

1

2

3

4. Managerial

1

2

3

5. Informative

1

2

3

6. Explanatory

1

2

3

7. Moralizing

1

2

3

8. T. pers. exp.

1

2

3

II. CONTROL BEHAVIOR

1

2

3

4

5

6

III. PUPIL INITIATING BEHAVIOR

1

2

3

4

5

6

7

8

9

COMMENTS

ID

PART TWO: IDENTIFYING DATA

1

2

3

4

5

6

7

8

9

0

Cl.

V.

Gr.

Type

ID

PART THREE: FIER CATEGORIES

I. TEACHER SOLICITATIONS

TARGET

1

2

3

4

5

NATURE

1

2

3

4

CONTENT

1. ?? reading

2. ?? picture

3. ?? gen info

4. ?? pers exp

5. Silent read

6. Oral read

7. Word attack

8. Loc. skill

9. Word know

10. Cont ex

11. Non-verbal

12. OTHER

II. PUPIL RESPONSE

FAILURE

1

2

3

III. TEACHER REACTION

1. Encourage

2. Prompt

3. Reprimand

4. Directive

5. Repeat?

6. Reword ?

7. Supp. ?

8. Group

9. T. answer

10. Pass on

11. OTHER

Pupil Attempts to Comply

[]

IIa. PUPIL RESPONSE

[ORAL READING RESPONSE]

IDENTIFIES PASSAGE

1

2

MISCUES

1

2

3

4

5

6

7

8

9

10

1. Hesitates

2. Mispron

3. Sub.Ling

4. Sem

5. Oth

6. Omission

7. Regress

8. Phrasing

9. OTHER

CORRECTION-Self

None

Teacher

Length of Passage

Total # errors

IIIa. TEACHER REACTION

[ORAL CORRECTIVE]

1. None

2. T ans

3. Ind. Miscue

4. App gen WA

5. App spec WA

6. Reprimand

7. Reread

8. Punctuate

9. Directive

10. Group

11. Pass on

12. OTHER

[OPEN CORRECTIVE]

1. None

2. Denial

3. Directive

4. Repeat ?

5. Repeat

6. Add Info

7. Exp. error

8. Yes, but

9. Slf Correc

10. Reprimand

11. Group

12. Pass on

13. OTHER

[CONFIRMING REACTION]

1. None

2. Min. confirm

3. Min. praise

4. Repeats response

5. Enc. extension

6. Expand on idea

7. Group praise

8. Invite other

9. OTHER

1

2

3

4

5

6

7

8

9

Fig. 6.8. Final Revision of the FIER instrument

Part three of the coding sheet represents the final draft of the FIER coding categories. In anticipation that certain observed behaviors would still be beyond the scope of the identified categories, appropriate blank spaces for describing these "other" behaviors were left.

Within each of the pedagogical moves comprising the episode, a number of very specific behavioral categories were identified. The general categories are specified on the FIER record form. In many cases, these general categories were further defined by the identification of more specific reading behaviors. An example of this would be the aforementioned question types involving the Guszak question categories. A complete description of all the behaviors categorized in applying the instrument in the analysis of the verbal behavior examined in this study is included in Appendix L. The description also establishes the specific procedures to be followed and the ground rules affecting the application of the FIER categories. The reader is urged to examine this information carefully before proceeding with the examination of the next chapter (7) which sets out the findings of the analysis of content of the observed classroom verbal interaction patterns.

Identifying the Episode

In one last attempt to insure that the mass of data could be handled equitably, the color-coded transcripts were surveyed once again, and each episode was identified numerically on the transcript. The color-coded transcript in Appendix K shows how the numbering system was applied. The numerical identification of an episode on both the transcripts and the coding sheet meant that any single episode could be

relocated without difficulty. Since the transcripts were read a second time to complete the numerical identification of the episodes, the identification also served as a verifying procedure for establishing the boundaries of specific episodes. As might be expected, the original color-coding of the parts of the episode were not always accurate, thus the numerical identification of each episode served as a double check on the reliability of the color-coding scheme. Because an episode could be located easily and quickly, because each episode was identified by number, the procedures for checking on the reliability of the application of the analysis were not only greatly facilitated but made specific kinds of reliability procedures possible. These reliability procedures will be discussed later in the chapter.

In these sections, the steps taken in the development of the Focused Interaction Episode in Reading (FIER) as an instrument for the analysis of the cognitive content of teacher-pupil verbal interaction during reading lessons have been described in detail. The scheme is admittedly a complex one, but then so are the verbal processes involved in the teaching of reading. While the complexity of the present instrument must seriously limit its applicability, except in the hands of a well-trained observer, it was hoped that the in depth and specific nature of the analysis would provide necessary and sufficient knowledge and understanding of what goes on during the teaching of reading to suggest more equitable analytical schemes for use in future studies.

The final revised form of the FIER instrument was used according to the procedures outlined to record the behavior within each episode identified in the transcripts for the second, third, and fourth visits to the nine classes observed. Specifically, each episode, as numeri-

cally identified in the transcripts, was examined, and the appropriate categories of behavior were analyzed and recorded using one FIER record form for each episode. Over 4000 forms were required to analyze the lessons. Of these, over 3700 met the requirements of the episode. Each episode was examined in the analysis and serves as the data basic to the findings discussed.

RELIABILITY OF THE CODING PROCEDURES

In line with previously established procedures, complex episodes were reserved for evaluation by the investigator and an independent observer. That is, where there were difficulties in making decisions about the categories corresponding to the observed behavior, the episode was set aside and the investigator and an independent observer made a joint decision about the nature of the observed behavior. While this procedure is undoubtedly questionable, it was one procedure that could be used with this type of data and had been used previously by Bellack (1966). In the several instances when the two observers could not reach agreement, the behavior was coded as "other."

Once the decisions about the more complex episodes had been reached, the investigator and the independent observer examined a selection of episodes in order to establish to the satisfaction of the investigator that there was a level of agreement between them. This cursory review of the episodes suggested that the categorization was reliable. However, while these general procedures may have been acceptable, in order to establish more directly the reliability of the

categorization, at a later date, the transcripts were turned over to the independent observer who then recorded approximately 10 per cent of the episodes. The third episode and each eighth episode (excluding teacher structuring and pupil initiated episodes) from each observation for each reading group were recorded.

The two independent categorizations were then compared and an inter-judge agreement for a number of the FIER categories were computed on the basis of the Arrington formula.¹ The specific categories and the percentage agreement calculated were:

- (1) Procedures for identifying the pupil respondent: .79 (When categories 1 and 2 which both dealt with the solicitation being stated before the respondent was designated were grouped, the percentage agreement was .84)
- (2) Directive and non-directive nature of the solicitation: .95
- (3) Broad nature of the solicitation: .77 (When categories 1, 2, 3, and 4 which all dealt with questions related to the selection content were grouped, the percentage agreement was .82)
- (4) Specific nature of the solicitation: .78 (calculated where there was agreement on the broad solicitation type)
- (5) General nature of the pupil response (unison; complying; initial failure but complies; failure and other) .85
- (6) Specific nature of the pupil response (word level oral reading; oral reading, and open responses) .84
- (7) Word level oral reading responses and teacher reaction
 - (a) Correctness of the response (Correct, Incorrect) .90
 - (b) Teacher's reaction (confirming, corrective) .88
 - (c) Teacher's specific corrective reaction: .74

Note: the frequency of incorrect responses did not support an analysis of specific teacher corrective or confirming reactions

¹ The Arrington formula is $2 \times \text{Agreements} / (2 \times \text{Agreements} + \text{Disagreements})$ (Feifel and Lorge, 1950).

(8) Oral reading responses and teacher reactions

- (a) Correctness of the response (no miscues or miscues recorded) .80
- (b) Teacher's general reaction (confirming or corrective) .86
- (c) Nature of the miscues .72 (This figure may be unreliable since the second observer categorized only the first three miscues in a passage read aloud and not all miscues)
- (d) Source of correction for the miscue (self, teacher, peer, teacher and peer) .76
- (e) Specific nature of teacher confirming corrective behavior (too few reactions recorded to support comparison)

(9) Open responses and teacher reactions

- (a) Nature of the pupil's response .84
- (b) General nature of the teacher's reaction (corrective, confirming) .80
- (c) Specific nature of the teachers' corrective reaction .82
- (d) Specific nature of the teacher confirming reaction .86

These percentage agreement scores were accepted as support for the original categorization of the observed behavior.

PREPARING THE DATA FOR ANALYSIS

The completed FIER coding sheets, each corresponding to the analysis of one episode (and/or teacher structuring and pupil initiated behavior) numbered over 4000. Prior to the analysis, these coding sheets were examined and certain general categories of behavior that would facilitate the analysis were identified. For example, a general category was added to designate the general nature of the pupils' responses (unison, complies, initial failure to comply, failure to comply and other). Another category was established to indicate the general nature of the complying response (word level oral reading, oral reading, and open responses). General categories for responses as correct and incorrect and general categories for teacher responses such as

confirming, corrective and extending were also identified.

The data were re-examined and these general categories were added. Once the general categories had been recorded, the data from each FIER coding sheet were transferred first to data summary sheets and subsequently to IBM processing cards.

The IBM 360/67 computer facilities of the University of Alberta were used in the analysis of the data. Cross tabulation tables based upon the procedures outlined in the Statistical Package for the Social Sciences (Nie and others, 1969) were computed in line with specific questions pertaining to the frequencies and percentages of the specific FIER behaviors for the different reading groups in the classes at the two grade levels.

The cross tabulation tables or crossbreaks (Kerlinger, 1964), showing both the frequencies and the percentages were generated and served as the basic data for a descriptive analysis of the content of primary reading lessons by reading group, class, and grade level.

SUMMARY

This chapter has described the steps involved in the development of the FIER as a technique for the analysis of the cognitive content of primary reading lessons. The procedures followed in using the FIER in this study, including the various steps taken in determining the reliability of the coding procedures were described. The steps taken in analyzing the data were explicitly set forth.

The findings of the analysis of the observed verbal interaction in the reading groups in the first and third grade will be the subject of the next chapter.

CHAPTER 7

FINDINGS AND INTERPRETATION: THE FIER ANALYSIS OF THE CONTENT OF PRIMARY READING LESSONS

The final revision of the FIER instrument, as described in the previous chapter, was used to analyze the total sample of reading-centered behavior recorded in the verbatim transcripts of the reading lessons observed in this study.

In accordance with the general research questions posed for the analysis, once the categorization was completed, crossbreak tables were prepared showing the frequencies and proportions of specific behaviors in terms of

- (1) the total sample independent of grade level
- (2) the two grade levels independent of the reading groups
- (3) the reading groups by level, independent of the different classes, and
- (4) the reading groups in each of the nine classes.

During the analysis, and subsequently in preparing this report, two problems reflecting the complexity of the FIER instrument were encountered. First, while the FIER generated a large volume of data, not all the information was of equal importance for the teaching of reading, especially when the focus was upon basal reading groups. In order to decrease the size and complexity of this report a decision was made to limit the text of this chapter to a descriptive analysis of those behaviors specific to the original dimensions of the episode: teachers' reading solicitations; pupils' responses to those solicitations and

teachers' reactions to the pupils' responses. In anticipation that some other behaviors identified by the FIER analysis would be of interest, selected behaviors not accounted for by the episode specifications are included in the Appendices. Those behaviors will be referred to in relevant sections which follow.

Second, while more than 3700 such episodes were analyzed, the incidence of certain behaviors was so low, (attributable to the specificity of the FIER categories) that the crossbreaks, especially for the individual groups in the nine classes, were essentially meaningless. In those instances where the frequencies were too low to support discussion, or the proportions very misleading, the findings have not been reported, although some reference may be made to them.

Because of the detailed descriptions provided for in the FIER analysis, in presenting the findings in this chapter, certain liberties have been taken in exploring the meaning of the findings for the teaching of reading. In particular, many questions raised by the analysis are focused upon and some attempt is made to consider their implications for future studies in the teaching of reading. This departure from normal reporting procedures seemed justified in the light of the impetus the FIER analysis gave to the development of the revised reading category system described in Chapters 8 and 9.

BACKGROUND TO THE INTERPRETATION OF THE FINDINGS

In this section selected background data basic to the analysis and interpretation of the findings are discussed.

Parameters of the Episode

Before proceeding to the discussion of the analysis, certain restrictions on the interpretation of the episode need to be recognized if the findings are to be interpreted in a meaningful way.

First, there was great variability in the complexity of episodes, as indicated in Figure 7.1. (Further examples are provided in Appendix M.) The complexity differential affected the number of episodes available for the analysis. Since complex episodes used more class time, fewer episodes were recorded, especially when lessons were shorter. The value in attempting to interpret the meaning of the number of episodes in any lesson, or in a lesson segment, was, therefore, severely restricted. To that extent, meaningful interpretation could only be achieved through the analysis of the behavior in the episode in terms of proportions of specific behaviors. This realization was basic to the decision, in this chapter, to confine the discussion to behavior within an episode. The number of episodes available for the analysis is reported in Table 7.1.

Description of the Variability in Lesson Content

Each teacher had indicated that she followed a basal approach to the teaching of reading, and since the basal approach both recommends and allows for variability in the content of the reading lesson, it was considered important to record the general lesson activities occurring during the observations. To account for lesson content, in a crude way, each episode was coded according to the lesson-type categories described in detail in Chapter 3 (p. 91).

Initially, it was thought that by coding the episodes according

SAMPLE EPISODES DRAWN FROM THE TRANSCRIPTS

1. WHAT IS THIS WORD?
puppy
PUPPY
2. WHO IS IN THE WAGON?
Tim
TIM IS IN THE WAGON
3. JIM, YOU TRY THIS LONG ONE NOW
Jane...said...(see) see me...WORK...work
GOOD
4. WHAT WAS SHE AFARID OF MIKE?
(no response)
WHAT WAS SHE AFRAID OF
the dog
YES, THE DOG
5. DO YOU LIKE TO PLAY IN THE PARK?
yes, yes (UNISON RESPONSE)
6. WHY WERE THEY THERE...READ THE FIRST PAGE TO YOURSELVES AND FIND OUT
....Silent reading....
7. CAN YOU READ AND FIND OUT WHY SHE DID THAT PHIL?
(no response)
COME ON, LOOK AT THE MIDDLE OF THE PAGE
(no response)
JIMMY
that she's doing it because she's happy
WHY PHIL?
because she's happy
YES, SHES HAPPY ISN'T SHE
8. HOW MANY CATS WERE SPOKEN OF IN THE STORY?
just one...one...
THE BLACK ONE...THATS RIGHT (controlled exercise)
9. HOW CAN YOU TELL THE DIFFERENCE BETWEEN AN ELECTRICITY AND THE GAS STOVE?
we have a gas stove downstairs like theres a big pipe comping...
ah...down...down into...this thittle hole...
U HUH...
and then....and then it...
YES
i forget
THERES A LITTLE...A LITTLE PILOT LIGHT IN THE CENTER ISN'T THERE
AND THERES A LITTLE LIGHT THAT STAYS LIT ALL THE TIME AND MOST OF
THE TIME YOU JUST TURN ON...THE LITTLE HANDLE...AND IF YOUR STOVE
IS ELECTRICITY ALLY YOU DO IS TURN IT ON

Fig. 7.1. Sample episodes from the transcripts showing the differences in episode complexity

Table 7.1. Total Number and Percentage of Episodes Recorded for the Reading Groups in Each of the Nine Classes at the Two Grade Levels Over the Three Observation Periods

G r a d e	C l a s s	High Group		Average Group		Low Group		Totals
		#	%	#	%	#	%	
One	I	296	42	179	25	226	32	701
	II	77	47	50	30	37	23	164
	III	213	43	132	27	148	30	493
	IV	68	25	79	29	127	46	274
	V	257	29	335	38	298	33	890
Three	VI			*221	76	69	24	290
	VII			*21	21	79	79	100
	VIII	66	16	268	64	86	20	420
	IX	39	8	106	23	316	69	461
Total number of episodes								3793

* Includes high-average group

to the lesson type categories, it would be possible to indicate the emphasis given to certain activities in the different classes and groups. However, in view of the differences in the complexity of the episodes, and the subsequent differences in the number of episodes recorded, this was not possible. (The original crossbreak data showing the number of episodes recorded in the different lessons is reproduced in Part 1 of Appendix M.)

The anecdotal records, and a general perusal of the lessons, however, did suggest that teachers tended to emphasize different general activities, and that, different activities were to some extent specific to the level of the reading group.

TEACHER SOLICITATIONS: FINDINGS AND INTERPRETATIONS

Teacher verbal behavior which attempted to elicit overt pupil responses, centered upon reading, were defined as teacher solitations. Solitations could take the form of questions, requests, directives, or commands. While solitations could be non-verbal, this analysis was concerned with verbal solitations only. Put most simply, this study attempted to answer the question "What do teachers ask pupils to do during the teaching of reading?" In accordance with the research purposes of the investigation, teacher solitations were examined to determine whether or not there were differences in the emphasis accorded each, when groups and classes at the first and third grade level were compared.

Solitations were first identified according to a number of

broad categories, and then specific categories of behavior within those broad categories were identified. A summary description of both the broad and specific solicitation types is recorded in Figure 7.2. For a complete description of the categories and the categorization procedures, the section on teacher solicitations in the "Dimensions of the FIER Analysis" reproduced in Appendix L should be examined.

Analysis of the Broad Solicitation Types

The total number of broad solicitations identified in the transcripts was 3730. Of these, 2481 were recorded for the first grade and 1249 were recorded for the third grade. All 3730 episodes, for which a teacher solicitation was identified, serve as the basis for the analysis and discussion in this report. The frequencies and percentages of the different broad solicitations for the total sample, grades one and three, and the reading groups at the two grade levels (the grade level results)¹ are reported in Table 7.2.²

These data reveal that, in the total sample, 66 per cent of the solicitations fell in three categories: Questions on the Story Content, Word Knowledge, and Oral Reading. When grade level is examined, the proportions in these three categories increase to 71 per cent in grade

¹ Throughout this chapter, reference is made to tables having exactly this format. For the sake of brevity, these tables are referred to as "the grade level results." Complementary tables showing the frequency (and percentage) distributions for the groups in each of the nine classes will be referred to as the "class level results."

² In reporting the percentages in the tables in this report, all percentages have been rounded. Therefore, in many tables, the sum of the percentage figures will not equal 100.

BROAD SOLICITATIONS

Category 1: Questions based upon or derived from the written content of the selection

Category 2: Questions based upon or derived from the picture content of the selection

Category 3: Questions on pupils' general information

Category 4: Questions on pupils' personal experiences

Category 5: Word knowledge--pronunciation and meaning of words

Category 6: Word analysis, explain or apply the word analysis skills

Category 7: Locational skills

Category 8: Silent reading

Category 9: Oral reading - no guiding question

Category 10: Controlled exercises - use of workbooks, blackboard (etc.) materials

SPECIFIC SOLICITATIONS

Kinds of questions: Recognition, Recall, Translation, Conjecture, Explanation, Evaluation

Kinds of questions: as above

(1) Pronounce word; (2) Meaning of word; (3) Given context clue; (4) Use word

(1) Sound-symbol relation; (2) Apply phonics skill; (3) State phonics principle; (4) Sound-syllable; (5) Syllable meaning; (6) Apply structured analysis principle; (7) State structural-analysis principle; (8) Spelling; (9) Alphabetizing; (10) Pronounce syllable; (11) Other

(1) Locate page; (2) Table of contents; (3) Other

(1) Read; (2) Guiding question; (3) "What it says"

(1) Read only; (2) Stress expression; (3) Audience or dramatization; (4) Other

(1) Read; (2) Complete response; (3) Questions on material; (4) How to do exercises; (5) Check work

Fig. 7.2. Summary description of the broad and specific solicitation behaviors identified in the FIER instrument

one, and decrease to 59 per cent in grade three. Whereas 37 per cent of the grade three solicitations involved questions on the story content, only 23 per cent of the grade one solicitations were recorded in this category. Balancing this, 26 per cent of the first grade solicitations called for word knowledge responses, compared with only 18 per cent in the third grade. The greatest difference between the two grades was the stress on oral reading in grade one (22 per cent) compared to grade three (4 per cent).

The different emphasis on these three solicitation categories at the two grade levels corresponds with what might be expected in comparing basal reading classes in grades one and three. In grade one, the larger proportion of oral reading and word knowledge solicitations probably reflects the emphasis on word recognition activities in basal reading programs, to insure that beginning readers acquire skills in translating printed symbols to their spoken counterparts. In grade three the emphasis shifts more to the comprehension and interpretation of the story content.

In grade three, word analysis solicitations (14 per cent) exceeded those of the grade one classes (6 per cent). In other words, while there were some attempts to introduce word analysis skills in grade one, emphasis on the acquisition of a sight vocabulary (word knowledge) prevailed, according to expectations.

Third grade pupils were called upon to respond to general information solicitations in 8 per cent of the episodes, while grade one pupils were asked to respond to this solicitation type in only 1 per cent of the episodes. This difference could reflect the tendency for basal reading authors to suggest that the content of the readers is within the

experiences of most children, at the respective age level. That these grade one teachers apparently accepted that assumption is pointed up by the evidence that they apparently did not attempt to determine the meanings children were bringing to the printed page.

This raises an important issue. If the authors' assumption is not valid in relation to the group of learners using the materials, a not unlikely prospect in view of the sub-cultural differences characterizing modern societies, then teachers may be ignoring an important reading prerequisite. The anecdotal record showed that on many occasions, pupils approached the teacher to have an object pictured in the workbook materials and/or the mimeographed materials identified. The problem was that the term used to name the object in the materials was different from the one held by the children. In one lesson the group took several minutes to name the object pictured in the reader. It was a merry-go-round.

Less than 1 per cent of the recorded solicitations fell outside the defined categories. While this may favor the validity of the FIER, one should remember that the FIER solicitation categories were adapted to the behavior observed in these classes. Therefore the instrument should have been equal to the analysis of the observed behavior.

The class level results related to the broad solicitation categories are recorded in Table 7.3.

In examining these data, the most obvious difference across first grade classes was in the number of episodes recorded. Fewer solicitations were recorded in Classes II and IV than in the other classes, and both emphasized oral reading solicitations to a greater degree.

Teacher II recorded a small proportion of comprehension solicita-

Table 7.3. Frequencies and Percentages of the Different Broad Solicitation Types for the Reading Groups in the Nine Classes

C l a s s	G r o u p	?? read.		?? pic.		?? gen. info.		?? per. exp.		sile. read.		oral read.		word anal.		loc. skills		word know.		cont. exer.		Other Totals		
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
I	H	116	39	20	7	2	1	2	1	7	2	65	22	25	8	3	1	43	15	11	4		296	
	A	63	35	11	6	1	1	7	4	4	2	42	24	3	2	7	4	30	17	4	2		179	
	L	25	11	10	4	12	5	1		7	3	19	8	51	23	2	1	31	14	51	23		226	
	H	18	23	1	1							35	46	5	7			16	21				77	
II	A									1	2	33	66	4	8			8	16				50	
	L	8	22	1	3							23	62			2	5	3	8				37	
III	H	23	11	24	11	4	2	25	12			21	10	21	10	5	2	60	28	30	14		213	
	A	26	20	57	43	1	1	15	11			18	14	6	5	3	2	1	1	4	3		132	
	L	18	12	35	24	1	1	6	4			10	7	10	7	2	1	10	7	52	35		148	
	H	30	44			2	3	4	6	2	3	19	28					11	16				68	
IV	A	40	51	1	1			1	1	4	5	27	34			1	1						79	
	L	44	35	1	1					6	5	57	45	2	2	5	4	2	2	1	1		127	
V	H	62	24	14	5	1	-			9	4	53	21	2	1	3	1	112	44		1	1	257	
	A	70	21	9	3					9	3	60	18	18	5	3	1	165	50	1	0		335	
	L	33	11	11	4	2	1	3	1	9	3	73	25	5	2	2	1	160	54				298	
	H																							
VI	C	92	42	37	17	44	20	14	6	9	4	4	2			6	3	6	3	9	4		221	
	L	42	61					7	10			11	16	2	3	1	1			5	7	1	69	
VII	C																							
	L					3	14			1	1			15	71	1	5	2	10				21	
VIII	H	66	100			25	32					27	34					13	17	13			79	
	A	119	44	4	2	12	5			2	1	15	6	22	8			75	28	2	1	11	5	268
	L	40	47	4	5			4	5	1	1	12	14					25	29				86	
	H	6	15			8	21	2	5												7	59	39	
IX	A	13	12									11	10	41	39			5	5	36			106	
	L	89	28	2	1	8	3	3	1	11	4	2	1	70	22	1		100	32				316	

tions (questions on: the reading content, picture content, general information, and personal experiences), and fewer solicitations in the word perception areas (word analysis and work knowledge) than the other grade one teachers.

In the word knowledge category, grade one class differences were very apparent. Whereas the high groups in Classes II, III, and IV had word knowledge solicitations emphasized, in Classes I and V, the groups were more equal. The low group in Class V recorded more word knowledge solicitations than the high group.

In the third grade classes the trend was toward an emphasis on word knowledge solicitations with the low groups, but not in every class. For example, Teacher VI posed no word knowledge solicitations to any of her reading groups.

The emphasis on word analysis skills in grade three is apparently a class specific phenomenon. Teacher VII, for example, emphasized word analysis solicitations to the exclusion of almost all other behaviors. Yet, while Teacher IX also emphasized this behavior, the other two third grade teachers (VI, VIII) recorded almost no word analysis solicitations.

In an analysis of the grade level data, the point was made that grade three teachers attended more to pupils' background knowledge and general information than the grade one teachers. These class level data clearly showed that Teacher VII accounted for most of the behavior recorded for the grade three level. There is some indication that average, combined, and high groups were allowed opportunities to bring information or their own ideas to the reading lesson, but this was not so for low groups.

The 100 per cent in the questions on the reading content for the high group in Class VIII is only meaningful when it is realized that the selection was read aloud by the teacher, before the questions were asked.

What the discussion in this section points up most clearly is that while one may generalize about classroom behavior from cross class results, there are class level differences which still need to be examined very carefully.

When references are made to basal reading classes, or other reading classes on the basis of the methodology cited, certain assumptions about the program come to mind. Clearly, those assumptions, whatever they may be, do not hold across all classes. Indeed, when one reflects upon much of the research in reading that has focused upon comparative analyses of different methodologies, the findings in this section raise some important questions.

The most important question surely is whether it is possible to compare reading methodologies, without first determining how the methods are articulated in practice. Undoubtedly, one reason why the methods studies have reported no significant differences in so many cases is that the behaviors of one teacher may cancel out those of another. Perhaps, too, the often cited finding that the experimental method, whatever it is, will prove more efficacious in the teaching of reading, reflects not the method per se, but how teachers choose to implement the method in actual practice. Drawing board prescriptions and observed behaviors might be very different indeed, according to this analysis.

Analysis of the Specific Solicitation Types

Each of the broad solicitation types are discussed in this section in terms of specific behaviors identified within each. The specific solicitation types were summarized in Figure 7.2 and are set out in greater detail in Appendix L.

Types of questions on the reading content. Six categories of questions on the reading content were identified and analyzed, according to Guszak's (1967) definitions, as, Recognition, Recall, Translation, Conjecture, Explanation, and Evaluation questions.

The grade level results in Table 7.4 show that there were differences in the total number of these six question types recorded, independent of the grade levels. First, almost 50 per cent of the questions were in the Recall category, yet less than 5 per cent were in the Translation category. There were almost equal numbers of Recognition and Conjecture questions recorded (14 per cent and 16 per cent respectively), just as there were almost equal numbers of Explanation and Evaluation questions (8 per cent and 9 per cent respectively).

The grade level breakdown suggests that third graders were called upon to read aloud answers to questions (Recognition) more often than were first graders (21 to 8 per cent respectively). Grade one teachers solicited more responses to conjecture questions from their pupils (20 per cent) than did the grade three teachers (11 per cent).

Low groups at both grade levels were asked a greater proportion of Recognition questions. While the high group in the first grade was asked more Conjecture questions (27 per cent) than were either of the other groups, in the third grade the low group was asked the greater proportion of Conjecture questions. The high grade three group was

Table 7.4. Frequencies and Percentages of the Specific Types of Questions on the Reading Content Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of questions on the reading content											
		Recognition		Recall		Translation		Conjecture		Explanation		Evaluation	
		f	%	f	%	f	%	f	%	f	%	f	%
One	H	14	6	102	43	7	3	67	27	26	10	27	11
	A	12	6	115	58	9	4	26	13	19	9	18	9
	L	20	16	65	51	7	5	20	16	11	9	5	4
Three	H	1	1	29	40	3	4	8	11	12	17	19	26
	A	50	38	48	36	12	9	8	6	9	7	5	4
	*C	8	9	57	62	4	4	12	13	4	4	7	8
	L	41	24	77	45	7	4	24	14	9	5	13	8
Total grade one		46	8	282	50	23	4	113	20	56	10	50	9
Total grade three		100	21	211	45	26	6	52	11	34	7	44	9
Total sample		146	14	493	47	49	5	165	16	90	9	94	9

* Combined high-average group

asked to give explanations more often than were the other groups. High groups at both grade levels had more opportunities to respond to Evaluation questions than the low groups at their respective grade levels. In other words, at both grade levels, high groups were asked questions which involved more complex thinking processes. Certainly, one question these findings raise is whether, or not, this difference represents a sound educational practice. Should less able readers concentrate upon the literal aspects of comprehension, to the exclusion of the more complex interpretive comprehension skills that might be stressed? Are these steps followed in these classes because low group pupils cannot handle the questions, or is there simply too little time left for this type of study because of an emphasis on other skills?

In theory, the groups in this study were being taught by the same method, the basal reading approach. Yet, we see that in the reading groups there was an emphasis on different comprehension skills. Under these conditions, one could argue that whatever the differences across teachers using the same approach, groups within the same classes are not being taught in the same way.

It was noted that grade three pupils were asked more Recognition questions. This could be explained by differences in the reading materials, for the amount of written discourse in grade one readers is quite limited and would decrease the possibilities for questions allowing for a read answer. The written discourse is increased substantially by third grade, thus accommodating the oral reading of selected passages as answers to questions. On the other hand, because low groups at both grade levels were asked more Recognition questions, the questions may be peripheral to the intention of the solicitation.

By asking a question requiring a read answer, teachers may have felt they were providing a purposeful oral reading experience. In other words, the oral reading would be perceived as the important component of the response, not the correctness of the response in relation to the question. If this is true, then it is obvious that attention to comprehension is even more limited in low groups than is apparent in the simple identification of the question types. There is a clear indication here, that this question deserves more study.

Lastly, these data show that the combined groups tended to be more like the high groups rather than the average groups, further suggesting that teachers' perceptions of pupils influence their practices to some considerable degree.

While the number of recorded episodes for each of the reading groups sometimes seriously distort the meaning of the percentage figures, the class level results in Table 7.5 suggest that individual teachers did ask different questions of their groups. Teacher II departed most radically from the other first grade teachers in that she asked very few questions on the story content, and where she did ask them, the questions were limited mainly to the Recall type. Teacher VII solicited no responses to questions on the written content of the selection from her grade three pupils. Teacher I and Teacher III were responsible for the differences observed across grade levels and across groups in the Conjecture category.

Types of questions on the picture content. Questions based upon the picture content were dealt with separately in order to determine, if possible, the role of pictures in the reading lesson. This move seemed justified in view of the limited written discourse in grade one

Table 7.5. Frequencies and Percentages of the Specific Types of Questions on the Reading Content Solicitations for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Recognition f %	Recall f %	Translation f %	Conjecture f %	Explanation f %	Evaluation f %	Totals
I	H	10	9					
	A	6	9					
	L	10	40					
II	H							
	A							
	L							
III	H	1	4					
	A							
	L	1	6					
IV	H							
	A							
	L							
V	H	3	5					
	A	6	9					
	L	1	3					
VI	H	8	9					
	*C	2	5					
	L							
VII	H							
	*C							
	L							
VIII	H	1	1					
	A	50	42					
	L	19	47					
IX	H							
	A							
	L							

* Combined high-average group

readers, and the role the pictures are expected to play in providing much of the story content. The question types identified were similar to those established for the written materials, except that the Recognition category was used to identify teacher solicitations which called for the simple identification of a picture part. As the data in Table 7.6 show, the greatest proportion of questions on the picture content fell into this category.

As would be expected, first grade teachers directed more questions to the picture content than did the third grade teachers. Furthermore, they relied more heavily upon Recognition type questions. That there were few Recall questions recorded probably reflects the tendency for questions on the picture content to be asked while pupils were looking at the pictures.

Compared to the third grade pupils, grade one pupils were asked to tell about the picture in their own words more often, as indicated by the greater percentage of Translation questions recorded. Grade three pupils were asked Conjecture questions which they were then asked to support or explain on the basis of the pictorial information. In other words, in grade one, the pictures were used to supplement and explain the written context, whereas in grade three, pictures were used to extend or go beyond the written content of the selection.

Low groups were asked a greater percentage of Recognition type questions when compared with the higher groups at both grade levels. Differences in the other categories were not so pronounced.

When the groups within each class are compared, as in Table 7.7 it is obvious that teachers differed to the extent and manner in which they used the pictorial content of the selection. Teachers II and IV

Table 7.6. Frequencies and Percentages of the Specific Types of Questions on the Picture Content Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of questions on the picture content												
		Recognition		Recall		Translation		Conjecture		Explanation		Evaluation		Totals
		f	%	f	%	f	%	f	%	f	%	f	%	
One	H	31	52	1	2	14	24	11	19	2	3			59
	A	46	59	1	1	12	15	16	20	2	3	1	1	78
	L	42	72			8	14	6	10	2	3			58
Three	H													
	A	1	25			1	25					2	50	4
	*C	11	30	5	13			14	38	7	19			37
	L	2	33					2	33	2	33			6
Total grade one		119	61	2	1	34	17	33	17	6	3	1	1	195
Total grade three		14	30	5	11	1	2	16	34	9	19	2	4	47
Total sample		133	55	7	3	35	14	49	20	15	6	3	1	242

Table 7.7. Frequencies and Percentages of the Specific Types of Questions on the Picture Content Solicitations for Each of the Reading Groups in the Nine Classes

Class		Group	Specific types of questions on the picture content										Totals	
			Recognition	Recall	Translation	Conjecture	Explanation	Evaluation						
			f %	f %	f %	f %	f %	f %	f %	f %	f %	f %	f %	
I	HAL	11 55			4 20	5 25						20 49		
		7 64			2 18	2 18						11 27		
		6 60			2 20	2 20						10 24		
II	HAL	1 100										1 50		
		1 100										1 50		
III	HAL	12 50			6 25	6 25						24 21		
		32 56	1 2	9 16	12 21	2 3	1 2					57 49		
		26 74		6 17	1 3	2 6						35 30		
IV	HAL	1 100										1 50		
		1 100										1 50		
V	HAL	7 50	1 7	4 29								14 41		
		7 78		1 11	1 11	2 14						9 26		
		9 82			2 18							11 32		
VI	H*CL	11 30	5 13		14 38	7 19					37 100			
VII	H*CL													
VIII	HAL	1 25		1 25								4 50		
		2 50		1 25		1 26	2 50					4 50		
IX	HAL				1 50	1 50					2 100			

were alike in that they asked no questions, or almost no questions, on the pictures.

Similarly, while the grade level data suggested that grade three teachers tended not to use the picture content, Teacher VI relied upon the pictures to some considerable degree. In fact, it was her behavior which accounted for any "picture" questions being recorded at the grade three level. These departures from the grade level results once again indicate the dangers in generalizing about classroom behavior on the basis of data collected in a number of different classes, at least when teaching is the focus of the analysis.

Types of oral reading solicitations. Before discussing the oral reading solicitations summarized in Table 7.8, it should be understood that "questions" calling for oral reading responses (Recognition), were recorded and discussed in the section on questions on the reading content. The discussion here focuses upon the other ways oral reading responses were solicited, including: simple directives to read aloud; directives to read aloud but where the pupils were admonished to stress expression and to improve the quality of their oral reading; an audience situation; and "other."

Fifty-six per cent of the third grade and 73 per cent of the first grade solicitations were simple directives to pupils to read aloud. It would appear that grade one pupils read aloud so that teachers could check their word perception abilities, whereas grade three pupils may have been asked to read aloud in order to practice and to refine their oral reading skills.

It is interesting that grade one low groups were reminded to stress expression more often than the higher groups. Is it possible

Table 7.8. Frequencies and Percentages of the Specific Types of Oral Reading Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of oral reading solicitations										Totals
		Read only f	%	Stress expression f	%	Read "What was said" f	%	Dramatize or audience f	%	Other f	%	
One	H	129	67	34	18	24	12	1	1	5	3	193
	A	97	54	31	17	29	16	20	11	3	2	180
	L	96	53	48	26	28	15	5	3	5	3	182
Three	H											
	A	2	8	14	54	1	4	9	35			26
	*C	4	100									4
	L	21	84			4	16					25
Total grade one		322	58	113	20	81	15	26	5	13	2	555
Total grade three		27	47	14	25	5	9	9	16			55
Total sample		349	57	127	21	86	14	35	6	13	2	610

* Combined high-average group

that this stress on expression reflects the teacher's expectation that the pupil's reading will be poor? If pupils have difficulty with the word perception task (and this was indicated in the Flanders' analysis), then their oral reading would no doubt be less fluent and lack expression. Given the day by day experience of the teacher, enduring the strain of listening to this "poor reading," it is not impossible that the teacher's expectations may be reflected in the phrasing of her solicitation. If this observation has any validity, then it raises a vital issue. What are the effects of these expectations on the learners? Is the admonishment to read with expression the answer, or should some attention be directed toward the solicitations and how they may be changed to influence the responses of pupils. For example, it was suggested in the discussion of the Flanders' analysis that if pupils were asked to read aloud less, or were asked to read easier materials, the problems of the poor reader would not be so visible. The main point here is that while the reciprocal relationship between pupil responses and teacher reactions is often referred to, there must be appreciation for the fact that the solicitation influences to some considerable degree the responses that pupils make. Put very simply, if pupils were not asked to read aloud, they would not make oral reading miscues. This problem will be returned to at a number of points in this chapter.

The class results recorded in Table 7.9 suggest that Teachers II and III seldom mentioned expression in their oral reading solicitations, while Teacher IV concentrated upon soliciting just the right phrasing and intonation from all her reading groups. In phrasing those solicitations, Teacher IV constantly prompted each pupil to try to do better

Table 7.9. Frequencies and Percentages of the Specific Types of Oral Reading Solicitations for Each of the Reading Groups in the Nine Classes

C l a s s		G r o u p	Specific types of oral reading solicitations							Totals	
			Read only f %	Stress expression f %	Read "What was said" f %	Audience (dramatize) f %	Re read f %	Other f %			
I	H A L	31 48	11 17	21 32		2 3			65		
		14 33	6 14	16 38	5 12	1 2		42			
		14 74		4 21		1 5		19			
II	H A L	33 94	2 6					35			
		33 100						33			
		23 100						23			
III	H A L	20 95	1 5					21			
		15 83	1 6	2 11				18			
		10 100						10			
IV	H A L	4 21	15 79					19			
		1 4	21 78	3 11	2 7			27			
		1 2	48 84	2 3	5 9	1 2		57			
V	H A L	41 77	5 9	3 12	1 2			53			
		34 57	3 5	10 16	13 22			60			
		48 66		24 33		1 1		73			
VI	H *C L	4 100						4			
		7 64	4 36					11			
VII	H *C L										
VIII	H A L	1 7						15			
		12 100	14 93					12			
IX	H A L	1 9		1 9	9 82			11			
		1 50				1 50		2			

* Combined high-average group

than the previous reader.

In the third grade classes, Teacher VII accounted for the largest proportion of oral reading solicitations, and along with Teacher IX, was more likely to set the audience condition for the oral reading responses. This finding questions the generalizations about the third grade classes made earlier. Not all teachers call for oral reading from their groups at the third grade level, and those who do, structure the oral reading situation differently.

Types of word analysis solicitations. The data for this category are summarized in Table 7.10. Of the 329 word analysis solicitations recorded, the greatest percentage involved phonetic analysis skills. Over two-thirds of these called for the identification of the sound-symbol relationship. That is, pupils were either asked for the sound equivalent of a letter or the letter equivalent of a sound. These sound-symbol word analysis solicitations were more dominant in the first grade, but were aimed more often at low groups at both grade levels. The other reading groups had more variety in the types of word analysis solicitations they were to respond to in the reading lesson. In grade one, the high groups were more likely to be asked to apply their skills in the analysis of a word, while in grade three, the average groups were asked more often to state phonetic analysis principles rather than to apply them. The combined, like the high groups in grade three, were not asked word analysis solicitations.

A number of the other sub-categories were specific to the grade level, for example, the structural analysis solicitations were restricted to the third grade classes.

The class level results in Table 7.11 suggest that an individual

Table 7.10. Frequencies and Percentages of the Specific Types of Word Analysis Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Sound symbol f %	Apply		State		Syllable symbol		Structural meaning unit		Apply s.a. skill		State s.a. principle		Rhyming		Spelling		Alphabet		Other		Totals
			f %	%	f %	%	f %	%	f %	%	f %	%	f %	%	f %	%	f %	%	f %	%	f %	%	
One	H	24	45	20	38	2	4		2	4					1	2	4	7					53
	A	14	45	14	45												3	10					31
	L	42	62	5	7												2	3	16	23	3	4	68
Three	H																						
	A	13	21	1	2	22	35						4	6			1	2	3	5	19	30	63
	*C										11	73	4	27									15
Total	L	42	42	12	12	9	9		2	2			4	4							30	30	99
	grade one	80	53	39	26	2	1		2	1					1	1	9	6	16	10	3	2	152
	Total																						
Total	grade three	55	31	13	7	31	17		2	1	11	6	12	7			1	1	3	2	49	28	177
	Total sample	135	41	52	16	33	10		4	1	11	3	12	4			1	0	10	3	19	6	329

* Combined high-average group

teacher might solicit behaviors from her groups which were not part of the solicitation repertorie of the other teachers at that grade level. For example, Teacher I was responsible for all the spelling and alphabetization solicitations recorded at the first grade level. Those findings could reflect the teachers' comment to the effect that they taught word analysis skills according to their understanding of the needs of pupils at that time. It will be recalled that no formal word recognition programs were referred to by the teachers.

The failure of the FIER to account for, in specific terms, all the observed behavior in these categories is highlighted by the number of solicitations which were categorized as "other," especially at the third grade level. The reason for this may rest in the point above that the behaviors in this category were idiosyncratic, in that each teacher had some scheme for teaching word analysis and the steps she took simply did not fit the defined categories well.

That so few behaviors were recorded in a number of the categories seriously limits the discussion in this section. What is suggested, is a need to examine teacher behavior in this area, but that to do so would require that these behaviors be given full emphasis in such a study. Since several teachers indicated that they taught word analysis skills to the whole class, perhaps those lessons could be examined to some advantage. Of course, there would still be a need to examine teacher behavior in this area under normal classroom teaching conditions.

Types of word knowledge solicitations. Word knowledge solicitations were divided into four specific categories: pronunciation of the word; pronunciation of the word where a context clue was provided; emphasis on the meaning of a word; and use of the word. The latter

category involved the pronunciation of the word in a meaningful context.

Emphasis on word knowledge solicitations was greater in grade one, with the largest proportion aimed at pupils pronouncing words singly or in short phrases (Table 7.12). Compared to grade three, less attention was given to the meaning of words in the first grade. By ignoring meaning, grade one teachers apparently accepted the assumptions of basal reading authors that the words in the selections were within the experiences of the children. By grade three, attention to meaning is stressed more in most basal series and was stressed more in these classes.

Somewhat more word pronunciation solicitations were aimed at the average and low groups in the first grade, but differences were not very great, and the meaning of this finding is questionable. In examining the class level findings in Table 7.13 the situation becomes somewhat clearer.

While all grade one teachers stressed word pronunciation solicitations over the other types of word knowledge solicitations (with the exception of Teacher II with her low group), Teacher V, and, to some extent Teacher I, accounted for most of the behavior recorded in this category. In terms of the frequencies, teachers in Classes II, III, and IV did not emphasize these activities. While the grade level findings suggested that the low groups were characterized by more behavior in this area, in Class III the high group recorded the greatest number of word pronunciation solicitations. In other words, these grade one teachers were more variable in their behavior in this area than probably would be anticipated.

Teacher idiosyncracies also affect the interpretation of the be-

Table 7.12. Frequencies and Percentages of the Specific Types of Word Knowledge Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of word knowledge solicitations								Totals
		Word pronounce		Word meaning		Context clue		Use the word		
		f	%	f	%	f	%	f	%	
One	H	212	88	10	4	11	4	9	4	242
	A	187	92	3	1	10	5	4	2	204
	L	190	92	4	2	6	3	6	3	206
Three	H									
	A	40	50	9	11	1	1	30	37	80
	*C	1	12	7	87					8
	L	107	78	21	15			10	7	138
Total grade one		589	90	17	3	27	4	19	3	652
Total grade three		148	65	37	16	1		40	18	226
Total sample		737	84	54	6	28	3	59	7	878

* Combined high-average group

Table 7.13. Frequencies and Percentages of the Specific Types of Word Knowledge Solicitations for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Specific type of word recognition solicitations								Total
		Pronounce word		Word meaning		Context clue		Use the word		
		f	%	f	%	f	%	f	%	
I	H	39	91	3	7	1	2			43
	A	22	73	3	10	5	17			30
	L	30	97			1	3			31
II	H	11	69			5	31			16
	A	8	100							8
	L	1	33			2	67			3
III	H	57	95	2	3	1	2			60
	A	1	100							1
	L	8	80	2	20					10
IV	H	10	91	1	9					11
	A									
	L			2	100					2
V	H	95	85	4	4	4	4	9	8	112
	A	156	94			5	3	4	2	165
	L	151	94			3	2	6	4	160
VI	H *C L	1	17	5	83					6
VII	H *C			2	100					2
	L	11	85	2	15					13
VIII	H									
	A	36	48	9	12			30	40	75
	L	12	48					9	36	25
IX	H									
	A	4	80			1	20			5
	L	84	84	15	15			1	1	100

* Combined high-average group

Table 7.14. Frequencies and Percentages of the Specific Types of Controlled Exercise Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

G r a d e	G r o u p	Types of controlled-exercise solicitations								Totals		
		Read exercise f	%	Complete the response f	%	?? on the material f	%	?? on the talk f	%		Check work f	%
One	H A L	12	29	29	69	1	2					42
		5	45	5	45			1	9			11
		33	32	36	35	24	23	5	5	6	6	104
Three	H A *C L	20	53	2	5	8	21	8	21			38
		1	11					7	78	1	11	9
		31	65	12	25	1	2			4	8	48
Total	grade one	50	32	70	45	25	16	6	4	6	4	157
Total	grade three	52	55	14	15	9	9	15	16	5	5	95
Total	sample	102	40	84	33	34	13	21	8	11	4	252

* Combined high-average group

havior observed at the third grade level. Only two teachers emphasized the word pronunciation solicitations, and Teacher IX stands out in the number she directed at the low group over the other groups. She recorded 84 in the low group, 4 in the average group, and none in the high group. It was Teacher VIII who had low and average groups use words in a meaningful context.

Any assumptions one may hold about what is going on in basal reading classes in terms of the introduction of new words should be held very tentatively, for if these findings suggest nothing else, they do point up that teacher behavior in this area is very variable.

Types of controlled exercise solicitations. The reading materials used in some teacher directed lessons were work-study exercises prepared at the chalkboard, on mimeographed sheets, or workbooks accompanying the series. Where these materials were used, several sub-categories of solicitations were identified, including: reading aloud from the exercises; completing the required responses; questions on the materials; completion of the tasks; and, checking of exercises completed.

Of the 252 solicitations recorded in Table 7.14, 102 involved pupils reading the exercises aloud and 84 involved the completion of the exercises. A number of the latter also called for read responses since pupils were often expected to read a sentence and fill in missing words and phrases. Very few solicitations (11) involved the correction of exercises completed, suggesting that teachers probably checked the work themselves, or had the pupils do it independently.

The grade level results indicate that the grade three pupils were asked to read exercises aloud, while grade one pupils were asked to complete the exercises under the teacher's direction. Grade one pupils

answered more questions from the materials, while grade threes were questioned more on how the assigned exercises were to be completed. What these findings suggest is that the grade one teachers used the exercise materials as teaching materials, whereas the grade three teachers used the materials in preparing children to do the assigned independent work.

Low groups not only recorded the greater proportion of controlled exercise solicitations, but were called upon to read exercises aloud more often than were the other groups. That this was the case may reflect the difficulties these pupils were having completing the exercises. Of course, if exercises were beyond the reading abilities of the pupils, then why were they being asked to do them in the first place? (In one class, the low group was using a workbook meant to accompany a pre-primer that was one level above the pre-primer the group was using in the reading lessons observed.)

The class level results (Table 7.15) suggest that not all teachers used exercise materials in the group teaching situation. At the first grade level, two teachers accounted for all the solicitations recorded in this category. At the third grade level, only Teacher IX used the exercise materials.

The anecdotal record showed that exercise materials were issued in a number of other groups, but that there were no episodes recorded, because the teacher dictated what was to be done and did not call for verbal responses. The findings, therefore, should not be interpreted as meaning that exercise materials were not the center of group lessons, but that such materials were not used in the manner specified by the dimensions of the FIER episode. This points up a serious weakness in

Table 7.15. Frequencies and Percentages of the Specific Types of Controlled-Exercise Solicitations for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Specific types of controlled exercise solicitations										
		Read		Complete		?? on		?? on		Checking		Total
		Aloud	%	Exercise	%	Material	%	Completing	%	Exercises	%	
		f	%	f	%	f	%	f	%	f	%	
I	H	4	36	7	64							11
	A	3	75	1	25							4
	L	23	45	12	23	13	25	2	4	1	2	51
II	H			1	100							1
	A			2	100							2
	L											
III	H	8	27	21	70	1	3					30
	A	1	25	2	50			1	25			4
	L	9	17	24	46	11	21	3	6	5	10	52
IV	H											
	A											
	L	1	100									1
V	H											
	A	1	100									1
	L	1	100									1
VI	H											
	*C	1	11					7	78	1	11	9
	L	3	60							2	40	5
VII	H											
	*C											
	L	2	15	8	61	1	8			2	15	13
VIII	H											
	A	1	50					1	50			2
	L											
IX	H											
	A	19	53	2	6	8	22	7	19			36
	L	26	87	4	13							30

* Combined high-average group

the FIER, its failure to account for all the verbal behavior occurring during reading lessons. The early recognition of this weakness, among others, led to the observational scheme discussed in the next two chapters of this report.

Other Characterisitcs of the Solicitations

The FIER analysis focused upon other characteristics of the solicitations, including the behavior used by the teachers in identifying the pupil respondents, and the nature of the language in stating the solicitation. Those findings are reported and discussed in Part 2 of Appendix N.

Summary

The range in the behaviors examined in this section clearly suggests that the reading activities in the nine classes were many and varied, and that there were many behaviors which tended to be class or group specific.

While the specific solicitations were very different, there were common elements among those aimed at the different reading groups. For example, solicitations calling for reading responses, regardless of their specific content, were more likely to be directed at the low reading groups. Furthermore, there were indications that solicitations ostensibly concerned with the development of comprehension abilities focused more upon oral reading when they were directed at the low reading groups. Related to this was the suggestion that oral reading was not solicited for its own sake, but for its contribution in developing pupils' word perception abilities. In other words, the solicitations

characterizing the low groups were restricted to one general area of skill development in reading--word perception.

In the more able reading groups there was greater variety among the solicitations, suggesting greater breadth in their overall reading program.

Whether low reading group lessons should concentrate upon the word perception task to the degree to which they do is beyond the scope of this investigation. What these findings indicate quite clearly is that basal reading programs are articulated differently across classes, and that they are articulated differently across the levels of reading groups. To speak of basal reading programs generally is to fail to fully appreciate these differences.

PUPIL RESPONSES TO TEACHER SOLICITATIONS

Each pupil response to the teachers' solicitations was examined in detail. However, at the first level of analysis, pupil responses were identified according to the following general categories: unison responses, complying responses, initial failure to comply, failure to comply, and "other." These general categories allowed for an independent analysis of pupils' unison responses, and their failures to comply with the solicitations. The two categories for "failure" set apart those episodes where pupils first failed to comply but were subsequently prompted to respond, and those episodes where pupils could not be prompted to comply with the solicitation. The "other" category covered such contingencies as loss of data, non-verbal responses, and teacher aborted solicitations which could not be analyzed.

The frequencies and percentages of these general responding behaviors for the reading groups at the two grade levels are summarized in Table 7.16.

The data suggest that grade one pupils made more unison responses than the grade three pupils, except for the grade three combined groups. While both grades recorded two-thirds of their responses as attempts to comply, the first grade pupils were more likely to attempt to comply without prompting than were third grade pupils.

The grade three combined (high-average) group made more unison responses than any other group. The combined and high groups also recorded fewer initial complying responses than the other grade three groups.

While there were differences across the reading groups in all categories, it is interesting that at both grade levels, the high groups recorded proportionately more responses in the initial failure to respond category, and subsequently, fewer initial complying responses. The differences at the first grade level were minimal (12 per cent compared to 9 per cent), but in the third grade the high group had more than twice the proportion of initial failure responses recorded than the average and low groups.

To account for this difference, it is necessary to trace the responses back to the original solicitations and thus to examine, for the first time, an interactive component of the content of the observed behavior. The relationship between the solicitations and the different general responding behaviors is the subject of the next section. Ideally, the responses should be examined in relation to the specific solicitation types, but due to the limited number of behaviors recorded

Table 7.16. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Teacher Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										Total
		Unison		Complies		Fails but complies		Failure		Other		
		f	%	f	%	f	%	f	%	f	%	
One	H	222	24	541	60	111	12	2	0	33	4	909
	A	170	22	514	66	73	9	1	0	17	2	775
	L	181	22	549	66	73	9	4	1	29	3	836
Three	H	7	7	60	57	35	33			3	3	105
	A	33	9	263	70	58	15			20	5	374
	*C	63	26	137	57	19	8			23	9	242
	L	59	11	389	72	73	13	3	1	18	3	542
Total grade one		573	23	1604	64	257	10	7		79	3	2520
Total grade three		162	13	849	67	185	15	3		64	5	1263
Total sample		735	19	2453	65	442	12	10		143	4	3783

* Combined high-average group

in many of the categories this was not possible, and, therefore, only the broad solicitations are discussed.

Relationship Between the General Solicitation Types and the General Nature of the Pupils' Responses

In this section, each of the solicitations is analyzed separately. No breakdowns for groups at the class level are recorded (although some references are made to those data) because of the limitations imposed by the size of the sample.

General responses to the questions on the reading content. The data in Table 7.17 show that 21 per cent of the first grade responses to these questions were unison responses, compared with only 12 per cent at the third grade level. Third grade pupils had more difficulty complying with these solicitations than the grade one pupils. The other categories were about equal for both grades.

High groups in the first grade recorded a higher proportion of unison responses and also had more difficulty making an initial complying response over the other two groups.

The grade three groups differed more radically in terms of the number of unison responses categorized, with the combined group recording 25 per cent of their responses in this category. The high group apparently had difficulty handling these solicitations, as evidenced by their problems in complying with the solicitations without some teacher prompting.

In previous discussion, it was noted that the questions aimed at the high groups often called for more complex responses. Apparently, those solicitations may have been out of line with the actual abilities

Table 7.17. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Questions on the Reading Content Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										
		Unison		Complies		Fails but complies		Failure		Other		Total
		f	%	f	%	f	%	f	%	f	%	
One	H	59	24	131	53	40	16			19	8	249
	A	41	21	121	61	30	15	1	1	6	3	199
	L	24	19	74	58	22	17			8	6	128
Three	H	5	7	44	61	20	28			3	4	72
	A	4	3	86	65	28	21			14	11	132
	*C	25	27	48	52	14	15			5	5	92
	L	22	13	95	58	35	21	2	1	9	5	163
Total grade one		124	21	326	57	92	16	1		33	6	576
Total grade three		56	12	273	59	97	21	2		31	7	459
Total sample		180	17	599	59	189	18	3		64	6	1035

* Combined high-average group

of these pupils. To put it another way, there is evidence here that the expectations of teachers, as these would be articulated in the questions they asked, may not have corresponded accurately with the abilities of pupils perceived as higher achievers. Of course, another interpretation could be that the other groups were not challenged to the same degree by the questions asked of them, and therefore, they were more able to respond.

That so many unison responses were recorded at the first grade level, especially for the high groups, suggests that teachers anticipated that pupils would know the right response. In other words, if the correct response were anticipated, a unison answer would be acceptable. Apparently, the high group was trusted to respond correctly.

General responses to questions on the picture content. Since third grade pupils recorded so few solicitations in this category, a very limited number of responses are recorded at that grade level in Table 7.18. Therefore, the value in examining responses in relation to the questions on the picture content is useful only at the first grade level. While the high group made the greatest percentage of unison responses, it was the average group who had more difficulty complying with these types of solicitations (22 per cent: Initial failure to respond).

General responses to questions on pupils' general information. Grade three pupils were asked for about as many more responses to these solicitations (Table 7.19) in relation to grade one pupils as the latter were asked questions on the picture content of the selections. The frequencies were so low, however, that interpretation is restricted. The high and average groups however could not respond well to these

Table 7.18. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Questions on the Picture Content Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										Total
		Unison		Complies		Fails but complies		Failure		Other		
		f	%	f	%	f	%	f	%	f	%	
One	H	16	27	31	52	6	10	2	3	4	7	59
	A	11	14	44	56	17	22			6	8	78
	L	9	16	39	67	9	15			1	2	58
Three	H											
	A			3	75	1	25					4
	*C	8	22	24	65	1	3			4	11	37
	L	1	17	2	33	3	50					6
Total grade one		36	18	114	58	32	16	2	1	11	6	195
Total grade three		9	19	29	62	5	11			4	9	47
Total sample		45	19	143	59	37	15	2	1	15	6	242

* Combined high-average group

Table 7.19. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Questions on Pupils' General Information Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

		General categories of pupil initial responses										
Grade	Group	Unison		Complies		Fails but complies		Failure		Other		Total
		f	%	f	%	f	%	f	%	f	%	
One	H			8	89	1	11					9
	A	2	100									2
	L	4	27	11	73							15
Three	H			1	12	7	88					8
	A			7	58	5	42					12
	*C	12	25	25	53	1	2			9	19	47
	L	1	3	25	76	3	9			4	12	33
Total grade one		6	23	19	73	1	4					26
Total grade three		13	13	58	58	16	16			13	13	100
Total sample		19	15	77	61	17	14			13	10	126

* Combined high-average group

solicitations.

General responses to questions on pupils' personal experiences.

The number of unison responses in this category (Table 7.20) would suggest that the questions were posed to determine whether certain personal experiences had been shared by the group. That pupils had some difficulty responding would suggest, perhaps, that they did not understand the question or were taking some time to think the question through. Perhaps the teacher's reaction behavior represents an impatience rather than a reflection on the pupils' actual abilities to respond.

General responses to oral reading solicitations. Unison oral reading responses were not so prevalent (Table 7.21) as unison responses to the other solicitations. Pupils also attempted to comply immediately with the solicitation, even though, as will be shown later, they may have had real difficulty completing their responses without corrective feedback from the teacher.

General responses to the word analysis solicitations. According to Table 7.22, the average grade one group recorded 48 per cent of their responses to word analysis solicitations in the unison category compared with only 23 and 25 per cent respectively for the high and low groups.

Grade one pupils had greater difficulty complying with the word attack solicitations, with the high group failing to comply 51 per cent of the time. Apparently, high group grade one pupils were asked a disproportionate number of word analysis solicitations that they were unable to handle, except with some prompting or other cue from the teacher.

Table 7.20. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Questions on Pupils' Personal Experiences Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										
		Unison		Complies		Fails but complies		Failure		Other		Total
		f	%	f	%	f	%	f	%	f	%	
One	H	6	19	24	77	1	3					31
	A	1	4	15	65	4	17			3	13	23
	L	1	10	8	80					1	10	10
Three	H			2	100							2
	A											
	*C	5	36	8	57	1	7					14
	L	3	21	9	64	1	7			1	7	14
Total grade one		8	12	47	73	5	8			4	6	64
Total grade three		8	27	19	63	2	7			1	3	30
Total sample		16	17	66	70	7	7			5	5	94

* Combined high-average group

Table 7.21. Frequencies and Percentages of the General Categories of Pupil Initial Responses to the Oral Reading Solicitation for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										
		Unison		Complies		Fails but complies		Failure		Other		Total
		f	%	f	%	f	%	f	%	f	%	
One	H	17	9	171	89	3	2			2	1	193
	A	19	11	158	88	2	1			1	1	180
	L	11	6	153	90	2	1			6	3	182
Three	H											
	A			26	100							26
	*C	2	50	2	50							4
	L	2	8	22	88					1	4	25
Total grade one		47	8	492	89	7	1			9	2	555
Total grade three		4	7	50	91					1	2	55
Total sample		51	8	542	89	7	1			10	2	610

* Combined high-average group

Table 7.22. Frequencies and Percentages of the General Categories of Pupil Responses to the Word Analysis Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										
		Unison		Complies		Fails but complies		Failure		Other		Total
		f	%	f	%	f	%	f	%	f	%	
One	H	12	23	12	23	27	51			2	4	53
	A	15	48	11	35	5	16					31
	L	17	25	39	57	8	12			4	6	68
Three	H											
	A	8	13	49	78	5	8			1	2	63
	*C			14	93	1	7					15
	L	5	5	79	80	15	15					99
Total grade one		44	29	62	41	40	26			6	4	152
Total grade three		13	7	142	80	21	12			1	1	177
Total sample		57	17	204	63	61	18			7	2	329

* Combined high-average group

In grade three, high groups were not asked to respond to word analysis solicitations. While the low groups were asked these types of solicitations, they had difficulty responding. Fifteen per cent of their responses were categorized as initial failure to comply, suggesting that the solicitations may not have been realistic in terms of their abilities.

That so many pupils had difficulty complying with the word analysis solicitations would suggest that the word analysis programs in these classes require to be examined more carefully. The point was made earlier that word analysis solicitations tended not to follow a logical ordering and that may be at the root of the problem.

General responses to word knowledge solicitations. The data in Table 7.23 show that the high grade one groups responded in unison to word knowledge solicitations more often than the average group, who in turn made more unison responses than low groups. These differences could reflect different teacher expectations for the reading groups in relation to their abilities to respond to the word knowledge solicitations. Anticipating that the high group pupils did know the words, these experiences could be perceived by teachers as practice exercises, rather than learning exercises. Anticipating that low groups would have difficulty recognizing words, teachers would be more likely to check specifically on individual progress through individual responses. Yet, the data also suggest that the expectations for the high group may have been somewhat unrealistic, since the more able readers had more difficulty complying than low group pupils. Apparently, the average group was best able to respond to the word knowledge solicitations directed at them, suggesting that expectations regarding their abili-

Table 7.23. Frequencies and Percentages of the General Categories of Pupil Initial Responses to Word Knowledge Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										Total
		Unison		Complies		Fails but complies		Failure		Other		
		f	%	f	%	f	%	f	%	f	%	
One	H	83	34	126	52	29	12			4	2	242
	A	49	24	146	72	8	4			1	1	204
	L	43	21	133	65	24	12	2	1	4	2	206
Three	H											
	A	10	12	55	69	12	15			3	4	80
	*C			6	75	1	12			1	12	8
	L	4	3	117	85	14	10			3	2	138
Total grade one		175	27	405	62	61	9	2	0	9	1	652
Total grade three		14	6	178	79	27	12			7	3	226
Total sample		189	22	583	66	88	10	2	0	16	2	878

* Combined high-average group

ties in this area may have been more realistic.

The grade three combined group was once more like the high group, in that they were asked to respond to fewer word knowledge solicitations. Yet, when they were asked to respond they had as much difficulty as both the low and average groups. If we assume that high group pupils were not asked to respond to the word knowledge solicitations because the third grade teachers believed they did not require practice in this area, the responses of the combined group might suggest that this expectation was out of line. Indeed, it could be argued that if each group was working at a level commensurate with the abilities of the members, then each group should have been equally challenged by the vocabulary demands of the selections they were reading. Even if the high group was acknowledged to perform better, one would expect, within the context of the basal reading lesson, that there would be some check on their word knowledge skills, at least at a meaning level. Apparently, this possibility is not considered relevant by the grade three teachers.

General responses to controlled exercise solicitations. One again, the grade one classes record a higher percentage of unison responses (27 per cent) over the grade threes (15 per cent) (Table 7.24). However, for the first time we find that the unison responses of the low group (31 per cent) exceed those of the high (19 per cent) and average (27 per cent) groups at the first grade level. Could it be that unison responses were called for in order to ensure that all pupils in the low group had read the exercises aloud, before completing them? Thus, in measuring the abilities of these pupils in responding to the exercise questions, the teacher could feel more confident that mistakes

Table 7.24. Frequencies and Percentages of the General Categories of Pupil Initial Responses to the Controlled-Exercise Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General categories of pupil initial responses										Total
		Unison		Complies		Fails but complies		Failure		Other		
		f	%	f	%	f	%	f	%	f	%	
One	H	8	19	33	79	1	2					42
	A	3	27	7	64	1	9					11
	L	32	31	62	60	6	6	2	2	2	2	104
Three	H											
	A	6	16	25	66	6	16			1	3	38
	*C	1	11	6	67					2	22	9
	L	7	15	38	79	2	4	1	2			48
Total grade one		43	27	102	65	8	5	2	1	2	1	157
Total grade three		14	15	69	73	8	8	1	1	3	3	95
Total sample		57	23	171	69	16	6	3	1	5	2	252

* Combined high-average group

reflected the pupil's inability to handle the ideas and not the simple reading of the exercise.

Once again, in assessing the findings at the third grade level, it is apparent that the combined groups were treated more like the high groups than the average groups, at least to the extent that they were asked to comply with fewer solicitations in this area. The low groups, as in the grade one classes, attempted a greater number of responses to controlled exercise solicitations. However, in this instance they did not have the same problems in complying as did the average group.

Summary. The general responses of pupils to the broad solicitation types have been analyzed in this section. The analysis has indicated grade level and reading group differences in the general categories of pupil responses to the broad solicitation types. For example, grade ones were more likely to make unison responses, while grade threes had more difficulty complying with the solicitations without some prompting from the teacher.

There were trends in the data to suggest group differences in the responses of pupils to the various solicitation types, and at several points in the discussion attempts were made to interpret what these differences might mean. At the first grade level the high group pupils had more difficulty, for example, complying with the word analysis solicitations compared to the other groups, suggesting that teachers' expectations about the word analysis skills of these pupils may not have been realistic.

The third grade combined group tended to record a higher proportion of unison responses. Given the larger group (high-average combined), the teacher may have relied upon unison responses to ensure

that each pupil had a chance to speak out. This group also had less difficulty replying to almost all the solicitations directed toward them, suggesting further that unison responses may have been accepted as behavior in a review-type lesson.

Pupils' Unison Responses and Their Failures to Comply

Pupils' unison responses and their failures to respond to teachers' solicitations were examined in greater depth, especially in terms of the teachers' reactions to these types of responses. The results of those analyses are discussed in Parts 3 and 4 of Appendix N. The rest of this report will concentrate upon an analysis of pupils' complying responses and teachers' reactions to those responses.

GENERAL NATURE OF PUPIL COMPLYING RESPONSES

A response was categorized as a complying response if the pupil attempted an overt response to the solicitation. Therefore, if a pupil failed to respond, but succeeded in doing so after prompting by the teacher, that response was analyzed as a complying response. The complying responses were grossly identified, to aid the analysis, according to four categories: (1) word level oral reading responses, (2) oral reading responses, (3) open responses, and (4) "other." A response which involved the pupil pronouncing a word or short phrase of three words or less was categorized as a word level reading response. This category accounted for the number of teacher solicitations involving sight word recognition skills. A response was categorized as an oral reading response when the respondent read aloud a passage exceeding

three words. If no reading was involved, the response was grossly identified as an open response. The term open was employed since these responses were less restricted than those involving oral reading. Non-verbal responses and data lost in the recording process were classified as "other."

The number and percentage of behaviors recorded in these four general categories of complying responses are summarized for each group and for each grade level in Table 7.25. The grade level data show that first grade classes responded with word level reading responses (24 per cent) more often than the third grade classes (15 per cent). When the group data are considered it is readily apparent that the low group in the third grade made about the same percentage of word level responses as all groups in the grade one classes, who were about equal on this one dimension. Grade three low reading groups were obviously closer to grade one reading groups in terms of this response behavior than they were to the other groups at their own grade level. The proportions of word level responses of the combined group were more like those of the high reading group.

First graders made more oral reading responses than did third graders. However, while the grade one groups were about equal in the number and percentage of oral reading responses they made, in the grade three classes, the low and average groups made a relatively higher number of these responses compared to the high and combined groups.

The greatest difference across grade levels was in the open response category: 70 per cent for the third grade and 45 per cent of the first grade. While the groups at the first grade level were alike in the proportions of their responses categorized as open responses, there

Table 7.25. Frequencies and Percentages of the Different Types of Pupil Complying Responses to Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General types of complying responses							Totals		
		Word knowledge f %	Open responses f %	Oral reading f %	Failure passage f %	Other f %					
One	H	151	23	306	47	191	29	4	1	2	654
	A	155	26	255	44	165	28	5	1	5	585
	L	143	23	275	44	183	29	13	2	22	626
Three	H	2	2	87	92	6	6				95
	A	42	13	200	62	65	20	13	4	14	321
	*C L	1	1	155	99						156
		114	24	282	61	55	12	14	3	14	465
Total grade one		449	24	836	45	539	29	22	1	20	1866
Total grade three		159	15	724	70	126	12	27	3	1	1037
Total sample		608	21	1560	54	665		49		21	2903

* Combined high-average group

were differences across the grade three groups. The high group and combined groups recorded 92 and 99 per cent respectively in the open response category, while the respective figures for the low and average groups were 55 per cent and 65 per cent. Apparently, the high and combined groups at the grade three level were much less restricted in their responses than were the other groups at that grade level.

While the solicitation may have called specifically for an oral reading response, often it was necessary for the pupil to first locate the passage to be read. Sometimes, as indicated in Table 7.25 this process of identification was not successful and usually invited some teacher reaction. In the few instances where this problem was recorded the teacher usually reacted with an explicit direction indicating where the passage could be found. The findings show that the low grade one group apparently had more difficulty finding the passage than did the other two groups. In grade three, both the average and low groups had about equal problems in identifying the passage. Since the high and combined high-average groups were seldom called upon to read aloud, there is no way of knowing whether they could handle this task or not.

The breakdown by class and within class groups reported in Table 7.26 reveals some interesting differences. Pupils in Class V, in accordance with the emphasis on word knowledge solicitations, account for a large percentage of the word level responses recorded for the first grade level. Fifty-two per cent of the responses from the average group fell in this category. Teachers VI and VII did not call for any word level responses from any of their groups. Similarly, despite the trend to word level responses at the grade one level, Teachers II and IV seldom solicited these responses.

The oral reading responses also differed across the classes and within class groups. In grade one, the range in the percentage of oral reading responses was as low as 15 per cent for the average group in Class III to a high of 84 per cent for the average group in Class II. While the percentage figures for the grade three level may be deceiving because of the differences in the number of recorded episodes for the different groups, there is an indication that in each class, the low group invariably made oral reading responses even if the other groups did not. It is only in Class IX that the average group made more oral reading responses than the low group. In that class, the low group responded at the word level more often, indicating that they were restricted mainly to oral reading responses.

Open responses were as few as 3 per cent for the low group in Class II to as high as 81 per cent for the average group in Class III. Over the three visits, pupils in the average group in Class II made only 1 open response and the low group only 3.

While the differences across the reading groups at the first grade level were not so great, there was a tendency for the low groups to record a higher percentage of reading responses than the average and high groups. When one accounts for the differences in the size of the reading groups, with the low groups generally smaller, the results suggest that in some classes, individual pupils in the low groups may have made a disproportionate number of oral reading responses compared to individual pupils in the other groups. Unfortunately, because the time factor was not accounted for, there is no way of determining how much time was taken up with oral reading behavior. At the third grade level, the high groups and the combined groups definitely read aloud

their responses less than the other groups, and in all but Class IX, the low groups made more oral reading responses.

The pedagogical significance of this finding must surely rest upon the restrictive nature of a read response. The words written must be translated to oral speech without error in that there is a direct correspondence between the two. What this means is that low groups are restricted to responses that may more often be incorrect at least to some extent. Moreover, since each segment of the response must be accurate, within a single response there are opportunities for more than one inaccurate or unacceptable response. The importance of this correspondence rests in the interaction pattern that may develop between the teacher and the oral reader. If the pupils are in a situation where unacceptable responses have a higher probability, then these same pupils are more likely to be the recipients of more corrective teacher reactions. Thus, while corrective reactions alone are not negative, the summation of such reactions, especially where one group receives far more, may over time produce negative effects. In the following sections where the pupils' responses are analyzed in relation to the reactions of teachers, this interaction pattern will be the focus of much of the discussion.

PUPILS' WORD LEVEL ORAL READING RESPONSES

AND TEACHER REACTIONS

The word level oral reading responses could quite easily be identified as correct or incorrect, with the exception of those instances where the response was lost on the tapes. Thus, three categories of

word level oral reading responses were identified: correct, incorrect, and "other." Pupils' word level oral reading responses identified by these three categories are summarized for the two grade levels and the different groups in Table 7.27.

While word level responses were correct better than 80 percent of the time at both grade levels, the responses of the groups differed. In the first grade, both the high and low groups were less able to respond correctly when compared with the average group. This finding supports several previous comments which have suggested that teacher expectations for the two groups may be unrealistic. Another way of interpreting this would be that teachers have a better understanding of the tasks assigned for average pupils, but are less sure of what should be done in the high and low groups.

At the third grade level, not only did the low groups make a disproportionate number of word level responses, but they made more incorrect responses. On this dimension, the low groups are set apart from the other third grade groups, and stand out in the amount of corrective reaction they would be exposed to by their responses.

Since low achievers in the first grade faced problems similar to those of low groups in the third grade, this would suggest that by grade three low achievers may have a long history of the same kinds of responses. What is more relevant is that the gap between the low and the higher groups apparently increases over time, so that one might question whether there is a cumulative deficit operating against low achievers in reading classes.

Table 7.28 summarizes the class level findings. This analysis adds little to the previous discussion except to point up that the

Table 7.27. Frequencies and Percentages of Correct and Incorrect Word Level Oral Reading Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Correctness of word level responses							
		Correct		Incorrect		Other		Totals	
		f	%	f	%	f	%		
One	H	126	83	23	15	2	1	151	
	A	145	93	10	7			155	
	L	125	87	18	13			143	
Three	H	2	100					2	
	A	38	90	4	9			42	
	*C			1	100			1	
	L	91	80	22	19	1	1	114	
Total grade one		396	88	51	11	2		449	
Total grade three		131	82	27	17	1	1	159	
Total sample		527	87	78	13	3	0	608	

* Combined high-average group

Table 7.28. Frequencies of Miscues Recorded for Pupil Word Level Oral Reading Responses for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Correctness of the oral reading response		
		Correct	Incorrect	Totals
I	H	28		28
	A	5		5
	L	6	2	8
II	H	4	1	5
	A	2	1	3
	L			
III	H	42	5	47
	A		1	1
	L	6	1	7
IV	H	10		10
	A			
	L			
V	H	54	7	61
	A	138	8	146
	L	113	15	128
VI	H			
	*C			
	L			
VII	H			
	*C			
	L			
VIII	H	2		2
	A	24	3	27
	L	6	6	12
IX	H			
	A	14	1	15
	L	86	16	102

* Combined high-average group

greater number of word level reading responses, the more errors reported. Beyond being a logical conclusion, this finding supports an earlier position that the restrictive nature of reading responses opens respondents to the possibility of making a greater number of incorrect responses.

Nature of the Word Level Reading Miscues

Word level oral reading miscues were analyzed to determine their specific nature. Four categories of miscues were identified to deal with the word level oral reading responses, including: (1) no response or hesitation, (2) mispronunciations, (3) substitutions, and (4) "other." Since so few word level miscues were recorded, the analysis supported little or no discussion. Miscues are discussed in greater detail when oral reading responses are discussed.

PUPILS' ORAL READING RESPONSES AND TEACHER REACTIONS

Like the word level responses, each of the extended (more than three words) oral reading responses was first analyzed in terms of its correctness. Any oral reading response in which a pupil made one or more miscues was identified separately from those oral reading responses where no miscue was recorded. A third category derived from the observed behavior involved those oral reading responses which were judged by the researcher to be correct, but to which the teacher reacted as if unacceptable. Once the analysis had been completed, it turned out that this behavior was specific to one teacher only and to all intents

this category is ignored in the discussion.

The frequencies and percentages of oral reading responses having recorded miscues or no miscues, by grade level, are summarized in Table 7.29.

It was established earlier that first graders recorded more oral reading responses than third graders. Comparing the groups at the two grade levels the results show that it was the high grade one group which made the greatest number of oral reading responses while the high grade three group made the fewest oral reading responses.

Proportionally, the high groups at both grade levels made fewer oral reading responses with recorded miscues than the other groups. In turn, the average groups made fewer oral reading responses with recorded miscues than the low groups.

If this finding were accepted at face value, it would probably reflect our expectations that more able readers would do better than less able readers when reading aloud. While that may be a valid and fair conclusion, it must be qualified, for these pupils were grouped for instructional purposes. Of all the principles of grouping none is more important than the one which dictates that the materials used should be appropriate to the reading level of the group. To that extent, each group should have equal difficulty with the materials they are required to read, and therefore they should record approximately the same number of incorrect responses. While it cannot be argued from these data whether or not the groups were using reading materials commensurate with their abilities, there is evidence that this important principle of grouping was not being met in some groups in these classes, at either grade level.

Table 7.29. Frequencies and Percentages of Oral Reading Responses Having Recorded Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Correctness of oral reading response						Totals
		No miscues recorded		Miscue recorded		No miscue but Teacher corrective		
		f	%	f	%	f	%	
One	H	82	43	106	56	3	2	191
	A	61	37	101	61	3	2	165
	L	58	32	124	68	1	1	183
Three	H	6	100					6
	A	18	28	46	71	1	2	65
	*C L	13	24	42	76			55
Total grade one		201	37	331	62	7	1	539
Total grade three		37	29	88	70	1	8	126
Total sample		238	36	419	63	8	1	665

* Combined high-average group

The data recorded in Table 7.30 offer some valuable insights into class differences and within class group differences. In Class II, for example, there was a miscue recorded for every oral reading response, regardless of the group. In Class IV, the percentage figures show that the high group made more oral reading responses with recorded miscues than did the other two groups. This finding could be misleading if interpreted at face value, for the anecdotal record showed that the low group was called upon to re-read passages already read by members of the group and in some instances the passages were read over several times. No doubt the opportunities for miscues would decrease with constant repetition. Given enough repetitions, short passages might even be memorized. In all other grade one classes, the findings follow the directions established for the grade level--an inverse relation between the oral reading responses with miscues and the group level.

In Class VIII where the average group recorded a greater proportion of oral reading responses with miscues, the passages read by each pupil were considerably longer than those read by the low group. Given the longer passage, were there more opportunities for miscues?

So far, only the general correctness of the orally read response has been considered. In the following section, the proportions of the different miscues recorded for each oral reading response will be discussed. Before proceeding, it should be understood that in making an oral reading response, the pupil could conceivably make as many oral reading miscues as there were words in the passage. In analyzing the responses of pupils in these groups, only the first ten miscues recorded in any one oral reading response were analyzed.

Table 7.30. Frequencies and Percentages of Miscues Recorded for Pupil Oral Reading Responses for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Miscues recorded						Totals
		No miscues		Miscues recorded		No miscues but teacher corrects		
		f	%	f	%	f	%	
I	H	33	52	30	47	1	1	64
	A	17	42	22	55			40
	L	8	31	18	69			26
II	H			33	100			33
	A			27	100			27
	L			20	100			20
III	H	16	48	17	52			23
	A	6	37	10	63			16
	L	1	6	17	94			18
IV	H	2	12	12	75	2	12	16
	A	7	27	18	69	1	4	26
	L	19	38	30	60	1	2	50
V	H	31	69	14	31			45
	A	31	55	23	41	2	4	56
	L	30	43	39	57			69
VI	H							
	*C L			10	100			10
VII	H							
	*C L			3	100			3
VIII	H							
	A L	8 7	18 30	35 16	80 70	1	2	44 23
IX	H	6	100					6
	A	11	52	10	48			21
	L	7	37	12	62			19

* Combined high-average group

Analysis of the Oral Reading Miscues

In developing the observational instrument it was predicted that miscues would be observed and several categories for recording miscues were established. These categories were:

- (1) hesitations
- (2) mispronunciations
- (3) linguistic substitutions
- (4) semantic substitutions
- (5) other substitutions
- (6) omissions
- (7) additions
- (8) regressions
- (9) phrasing problems
- (10) other

The first question explored in analyzing the data was what kinds of miscues were made by pupils in the different reading groups? It was anticipated that identification of the specific type of miscue would make the interpretation of the teachers' reactions more meaningful.

The hesitation miscues. While hesitations were recorded simply as one of the miscue categories in the FIER instrument, when it came to the analysis of the observed behavior, the decision was made to analyze the hesitation miscues separately from those miscues which were actually verbalized (overt miscues) by the respondent. One reason for this step was that hesitation miscues, as indicated in Table 7.31, were recorded more frequently than all other miscues combined, at least in the grade one classes. Even in the grade three classes, the number of hesitations recorded for the low groups tended to equal the total overt

Table 7.31. Number of Hesitation and Overt Oral Miscues Recorded for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Number of Miscues		
		Hesitation miscues	Overt oral miscues	Totals
One	H	225	162	387
	A	173	161	334
	L	354	197	551
Three	H			
	A	65	97	162
	*C			
	L	81	85	166
Total grade one		752	520	1272
Total grade three		146	182	328
Total sample		898	702	1600

* Combined high-average group

miscues recorded and for the average groups the differences were not so great.

These differences were not always sustained at the class level, as indicated by the findings in Table 7.32. In Classes I and IV, the high groups made fewer hesitation miscues than overt miscues and in Class IV, hesitations were less for all groups.

So few groups read aloud in grade three that interpretation is restricted. Yet, in Class VIII, where the average group recorded more hesitation miscues than overt miscues, there is still very little difference in the number of hesitations and the number of overt miscues.

To appreciate these findings, some information from the anecdotal records is necessary. In Class I, for example, the high group often read sentences from the chalkboard after volunteering to do so. It would seem reasonable that volunteers would offer to read, only if they felt confident that they could complete the task correctly. Under these conditions miscues would probably be reduced. That these pupils made a greater number of overt miscues could reflect the opportunity they had to work through the passage to arrive at what they believed was a correct translation, even though the oral reading involved substitutions and mispronunciations.

In Class IV, where all groups recorded fewer hesitation miscues than overt miscues, the oral reading solicitations were almost always qualified by a directive to the pupil to concentrate upon improved expression. In attending to perfect expression and phrasing, pupils seemed to stumble and mispronounce or substitute words. Because there were many re-readings of the same passage, a point noted previously, pupils approached the reading task confidently, even if in practice

Table 7.32. Number of Hesitation and Overt Oral Miscues Recorded for the Reading Groups in Each of the Nine Classes

C l a s s	G r o u p	Types of miscues recorded		
		Hesitations	Oral	Total
I	H	23	45	68
	A	26	26	52
	L	36	26	62
II	H	132	67	199
	A	91	66	157
	L	120	52	172
III	H	32	16	48
	A	19	7	26
	L	61	21	82
IV	H	8	25	33
	A	11	45	56
	L	35	61	96
V	H	20	9	29
	A	26	17	43
	L	102	37	139
VI	H			
	* A L	26	23	39
VII	H			
	*C L	4	1	5
VIII	H			
	A	47	85	132
	L	41	42	83
IX	H			
	A	18	12	30
	L	10	19	29

* Combined high-average group

their confidence was not always warranted. Moreover, this teacher prefaced many solicitations with the request or directive that the reader do a better job of reading the passage than the previous reader. Volunteers, who thought they could do "better" were also solicited, thus pointing up the confidence factor again. Undoubtedly, the volunteer believed he could out-do the previous reader.

Several of these comments suggest that confidence may be a key factor in having pupils try out their skills. Where the skills are known to be lacking, readers would be less likely to feel very confident. When one considers that low achievers made proportionately more miscues, which undoubtedly resulted in considerable corrective feedback, the opportunities for them to gain confidence in their reading abilities would be seriously limited.

The problem faced by the low groups is highlighted by the findings reported in Table 7.33. Not only did low groups record a greater percentage of oral reading responses having miscues, but they apparently made a greater number of miscues within the context of the individual response, compared to the high and average groups. This is borne out in Table 7.34 where the total number of oral reading responses and the actual number of recorded miscues are compared for each group in each class. If the individual dimension is added, that there were usually fewer pupils in the low groups, the actual number of miscues per pupil is probably much higher in low groups compared to those for individual pupils in the upper groups. The importance of this finding will be explored in greater detail when the teacher reactions to miscues are discussed.

The hesitation miscues have other important implications. For

Table 7.33. Comparison of the Total Number of Recorded Miscues and the Total Number of Oral Reading Responses for the Reading Groups at the Two Grade Levels.

Grade	Group	Total number of miscues recorded	Total number of oral reading responses
One	H	387	191
	A	334	165
	L	551	183
Three	H		6
	A	162	65
	C		
	L	166	55

Table 7.34. Comparison of the Total Number of Recorded Miscues and the Total Number of Oral Reading Responses for the Reading Groups in Each of the Nine Classes

C l a s s	G r o u p	Total number of recorded miscues	Total number of oral reading responses
I	H	68	64
	A	52	40
	L	62	26
II	H	199	33
	A	157	27
	L	172	20
III	H	48	33
	A	26	16
	L	82	18
IV	H	33	16
	A	56	26
	L	96	50
V	H	29	45
	A	43	56
	L	139	69
VI	H		
	C		
	L	39	10
VII	H		
	C		
	L	5	3
VIII	H		
	A	132	44
	L	83	23
IX	H		6
	A	30	21
	L	29	19

example, when teachers are asked why they have pupils read aloud, they invariably reply that this is one way to become aware of each pupil's individual problems. It is implied that this information is used to guide each child in his progress toward greater skill in reading. Yet, these hesitation data suggest that teachers may get very little specific information from an oral reading response. That is, in hesitating, the pupil remains silent, and, therefore, reveals little about his specific problem. While a hesitation may indicate that the next word is troubling the reader, we know that there are a number of other reasons why pupils may hesitate. For example, pupils may be able to "read" the next word in sequence, but having lost the meaning of the passage, that word as perceived is no longer meaningful. The reader hesitates, therefore, because he does not trust his judgment. If a pupil is reading well, the problem may rest in a later word, and the pupil may hesitate sometime in advance of the word creating the difficulty. Even if the problem does rest with the next word, the silence indicates nothing about the specific difficulty of the reader. Is he unable to pronounce the word? Has he tried out certain skills only to find them lacking? Has he pronounced the word but is puzzled by its meaning? Whatever the difficulty, from the silence, teachers learn very little indeed.

Given these possibilities, the question which becomes important is how do teachers react to these oral reading hesitation miscues? Before this question could be examined, it was necessary to determine the source of the correction to the hesitation miscues. That is, not only did pupils self-correct, and teachers correct, but the analysis also revealed that other pupils often corrected the reader.

The sources for the correction of the hesitation miscues recorded

in the oral reading responses are summarized in Table 7.35. The sources of correction identified are: self; teacher answering; teacher providing another corrective cue; peer answering; and peer and teacher answering. According to the findings, when a child hesitated, given time, he was sometimes able to correct himself. Where the pupil could not self-correct, the teacher might react, if only to indicate that another pupil should help out. In a number of instances, peers offered spontaneous "help" with no direction from the teacher. It was observed that where pupils continuously hesitated, even the slightest hesitation might elicit a spontaneous correction from another pupil.

The data in Table 7.35 also reveal that high groups made more self-corrections when compared with the other reading groups. Peers took the initiative in correcting their classmates' hesitations more often than pupils were able to self-correct in the high and average groups in the first grade classes.

Teachers generally responded to the hesitation miscues by providing the next word in sequence rather than stopping the flow of reading by giving the reader any other cue. By providing the next word in sequence, these teachers were adhering to the practice recommended in the literature. On the other hand, given the limited information in the hesitation, providing the next word in sequence may have been the only logical reaction. In other words, we must ask whether teachers were following the recommended practice more by default than design.

Peer corrective responses which were spontaneous, may have been a natural result of pupils being encouraged to read along silently. As a reader encountered difficulty, other pupils, anxious to get on with the reading, may have felt prompted to verbalize the next word in

Table 7.35. Frequencies and Percentages of the Different Sources of Correction for Hesitation Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Source of correction						Totals				
		Self f	Self %	Peer f	Peer %	Teacher answers f	Teacher comment f		Teacher -peer f	Teacher -peer %		
One	HAL	90	44	91	44	13	6	8	4	3	2	205
		73	40	74	40	23	13	8	4	5	3	183
		141	40	106	30	63	18	38	11	6	2	354
Three	HAL*CL	45	68	3	5	14	21	4	6			66
		48	55	9	10	23	26	8	9			88
		304	41	271	37	99	13	54	7	14	2	742
Total	grade one											
Total	grade three	93	60	12	8	37	24	12	8			154
Total	sample	397	44	283	32	136	15	66	7	14	2	896

* Combined high-average group

sequence.

One question which must be asked is whether or not the teacher's and pupils' corrective behaviors served as a source of correction. It is not impossible that by the time a correction was forthcoming, the reader may have self-corrected already. Since there were several instances where a wrong corrective reaction from a member of the group was subsequently verbalized by the reader, some of the corrective behavior was reaching the reader.

Since teachers tended to provide low achievers with cues other than answers, it followed that they were to some extent using the oral reading situation as an occasion for helping pupils acquire independent word attack skills. At the same time, it also points up the emphasis on the acquisition of word perception skills with groups of low achievers in reading. That such cues were given more often to low groups, supports the previous conclusion that oral reading in low reading groups was for the purpose of developing word perception skills and not oral reading per se.

The class level results summarized in Table 7.36, point up some interesting differences. In Class II, where pupils had the greatest number of recorded hesitation miscues, fewer self-corrections were recorded than in the other classes. Apparently, when pupils were less able to make correct responses, they were less able to self-correct. There were indications in this class that the teacher relied upon peer correction, and seemed unaware of the amount that was going on. In this class, the groups were left on their own, with one pupil reading aloud. Also, the teacher allowed for many interruptions from the independent group during the reading lesson. Since the teacher was not attending

Table 7.36. Frequencies of the Different Sources of Correction to Hesitation Miscues for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Source of correction to hesitation miscues					Totals
		Self	Peer	Teacher answers	Teacher comment	Teacher and Peer	
I	H	15	6	1	1		23
	A	13	9	1	3		26
	L	18	7	3	8		36
II	H	29	79	10	2	2	132
	A	16	63	17		5	91
	L	19	81	9	6	5	120
III	H	20	5	2	4	1	32
	A	12	1	5	1		19
	L	29	8	21	3		61
IV	H	7			1		8
	A	11					11
	L	16		3	16		35
V	H	19	1				20
	A	21	1		4		26
	L	59	10	27	5	1	102
VI	H						
	*C						
VI	L	20	4		2		26
VII	H						
	*C						
VII	L	2	1		1		4
VIII	H						
	A	35	1	9	3		47
VIII	L	21	3	21	3		41
IX	H						
	A	10	2	5	1		18
IX	L	5	1	2	2		10

* Combined high-average group

solely to the pupils' oral reading, corrections often had to come from other group members. Apparently, the pattern established under those conditions carried over to lessons where the teacher could offer guidance. The problems were compounded because the solicitations called mainly for oral reading responses. These pupils recorded many more miscues partly because they made so many more oral reading responses. There were also indications that in devoting so much time to oral reading from the basal reader, pupils in this class had moved ahead to selections well beyond their reading capabilities and instructional level. Since there were only 4 pupils in the low group, compared to 7 in the average group and 10 in the high group, the miscue rate in the low group suggests that individually, low group pupils were having particular difficulty reading aloud from the assigned materials.

The overt (oral) miscues. A number of categories of verbalized or overt miscues were established for the analysis, including additions, mispronunciations, linguistic substitutions, semantic substitutions, other substitutions, omissions, regression, phrasing problems, and "other." The grade level results recorded in Table 7.37 show, once again, that the total number of overt miscues was higher for the first grade than the third grade.

The findings indicate that first grade pupils, regardless of their group designation, tended to make more substitution miscues than other miscues. While substitution miscues still prevailed in the third grade, average achievers made more mispronunciation miscues than the low groups. (High and combined groups did not read aloud.) Regression miscues also increased at the grade three level.

It is possible that the larger proportion of substitution miscues

Table 7.37. Frequencies and Percentages of the Different Types of Oral Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of oral miscues										Totals								
		Addition f %	Mis- pronounce f %	Linguistic substitute f %	Semantic substitute f %	Other substitute f %	Omissions f %	Regressions f %	Phrasing f %	Other f %										
One	H	11	7	16	10	31	19	27	17	21	13	8	5	27	17	10	6	11	7	162
	A	4	3	9	6	34	21	16	10	30	19	13	8	23	14	16	10	16	10	161
	L	4	2	9	5	43	22	22	11	36	18	14	7	37	19	14	7	18	9	197
Three	H																			
	A			16	18	21	24	8	9	6	7	4	5	19	22	13	15			87
	*C L			11	13	13	15	11	13	12	14	6	7	18	21	12	14	2	2	85
Total	grade one	19	2	34	7	108	21	65	13	87	17	35	7	87	17	40	8	45	9	520
Total	grade three			27	16	34	20	19	11	18	11	10	6	37	22	25	15	2	1	172
Total	sample	19	3	61	9	142	21	84	12	105	15	45	7	124	18	65	9	47	7	692

* Combined high-average group

in grade one reflect beginning readers' less developed word analysis skills. Lacking such skills, pupils would depend upon the skills they had acquired, which at this level, and in the basal reading program especially, would consist mainly of sight vocabulary and application of context clues.

That low achievers made more miscues which were inconsistent with the linguistic and semantic context would suggest that their abilities in using context clues were less well developed. Higher achievers, armed with word analysis skills, tended to mispronounce more words.

It is possible that more able pupils, conscious of the linguistic inconsistencies in the basal reader language, would be more likely to add words while reading in order to correct those inconsistencies. This could account for the greater number of addition miscues recorded for those pupils. Conversely, the low group, often intent upon word by word reading and less conscious of the flow, of language would record fewer addition miscues. Since the basal readers at the grade three level are closer to the children's basic language patterns, this could explain why fewer addition miscues were recorded at that level.

That these remarks are highly speculative is borne out by the small range across the reading groups in terms of these different types of miscues. However, the trends are apparent, and do show up differences in the response patterns of the different reading groups.

That so few miscues were identified as "other" suggests that the miscue categories identified reflect the kinds of miscues made during the oral reading responses quite accurately. That there may be much to be learned from an indepth analysis of the "other" category is not disputed, but is simply beyond the resources of this investigation.

The miscues have been summarized for the different groups in the different classes in Table 7.38. Additions, it will be noted, were recorded for only two of the grade one classes, and Class IV accounts for most of those recorded. Interestingly, it was in Class IV that oral reading with expression was stressed. The presence of additions in these oral reading responses offer support for the previous conclusion that pupils may make addition miscues in an attempt to correct upon the basal reader language. Pupils who are pressed to make the phrases and sentences "sound just the way we would say them" may need to restructure the language, since the reader language would not be a direct reflection of how "we would say it." This might also account for the greater number of regressions recorded in these groups, for as pupils concentrated upon the expressive quality of their responses, they may have attended less to the written words. Of course, by regressing rather than hesitating, readers maintain some control over their own reading.

In examining teacher reactions to overt miscues, again it was necessary to account first for the source of correction.

The data in Table 7.39 show that at the first grade level, pupils tended to self correct more often than at the third grade level, but that peers corrected overt miscues less often than hesitation miscues. Is it possible that other pupils may be less conscious of the occurrence of an overt miscue, than they would be of a hesitation? This is suggested in the grade one classes where peer corrections were more prevalent in the high groups. Perhaps, lacking confidence in their own abilities, low achievers were less likely to indicate to another pupil that his response was wrong. Unless the teacher reacted to a

Table 7.38. Frequencies of the Different Types of Oral Reading Miscues for Each of the Reading Groups in the Nine Classes

		Categories of oral reading miscues											
C	G	Addi- tions	Mis- pronounce	Linguistic substitute	Semantic substitute	Other substitute	Omis- sions	Regress	Phras- ing	Other	Totals		
I	H A L	2	11	9	3	3	1	10	5	1	45		
				5	3	8	1	6	1	2	26		
			4	4	3	6	2	4	1	2	26		
II	H A L		4	18	14	13	4	10	2	2	67		
			2	19	7	13	12	6	6	1	66		
			3	15	9	12	7	4	2		52		
III	H A L		1	4	3	3		2	2	1	16		
				1	1	4		1			7		
				3	3	6	2	6	1		21		
IV	H A L	7			5		3	4	1	5	25		
		4	4	6	2	1		9	8	11	45		
		1	2	5	2	5	1	19	10	16	61		
V	H A L	2	3	3	2	2		1		2	9		
				16	3	4		1	1	2	17		
		3			5	7	2	4			37		
VI	H *C L		2	2	2	5	2	5	4	1	23		
VII	H *C L				1						1		
VIII	H A L	14		20	2	6	3	18	12		85		
		7		6	8	3	3	8	6	1	42		
IX	H A L	2		1	6		1	1	1		12		
		2		5		4	1	5	2		19		

* Combined high-average group

Table 7.39. Frequencies and Percentages of the Different Sources of Correction for Oral Reading Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Source of correction									
		Self	Peer	Teacher	Teacher	Teacher	Teacher	Teacher	Teacher	None	Totals
		f	f	f	f	f	f	f	f	f	
		%	%	%	%	%	%	%	%	%	
One	HAL	86	10	14	9	26	16	7	4	19	162
		53	6	9		16		4		12	
		74	3	21	13	44	27	9	6	10	161
		64	3	12	41	60	31	9	5	19	196
		33	2			31		5		10	
Three	HAL	23		27	47	7	12	1	2		58
		40				12					
		17	2	22	39	11	19	5	9		57
Total	grade one	224	16	76	15	130	25	25	5	48	519
		43	3			25				9	
Total	grade three	40	2	49	43	18	16	6	5		115
		35	2			16					
Total	sample	264	18	125	20	148	23	31	5	48	634
		41	3			23				8	

* Combined high-average group

miscue, who was to quibble?

Teachers tended to correct the overt miscues more at both grade levels. While they still tended to provide the next word in sequence, teachers reacted differently to the overt miscues of low groups, by providing other cues. The emphasis on word perception skills in low groups is pointed up again.

That teachers reacted to overt miscues with other cues, than answers, more often than for hesitation miscues could reflect the possibility that overt miscues armed teachers with more information about the reader's difficulty. Certainly that knowledge could open new avenues for corrective teacher reactions.

The teacher corrective reactions identified for the purpose of the analysis included:

- (1) Teacher answers--provides the next word in sequence.
- (2) Attention of the reader is directed to the fact that he has made a miscue, thus indicating the need for self-correction.
- (3) Teacher recommends the use of a general word analysis skill, such as "try your sounds" or "what might it be" (context).
- (4) Teacher suggests a specific word analysis skill such as "try the first sound" or "look again at the last two letters."
- (5) Pupil is directed to re-read.
- (6) Pupil is directed to attend to the punctuation.
- (7) The group is directed to provide the word.
- (8) Teacher specifies that a pupil help.

The findings for teachers' first reactions to overt miscues are summarized in Table 7.40. The findings suggest that when a teacher reacted, other than by answering, the most often recorded reaction was

Table 7.40. Frequencies of the Different Teacher First Corrective Reactions to Pupils' Oral Reading Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

		Types of teacher first corrective reactions										
G r a d e	G r o u p	Ans.	Ind. Miscue	Gen. W.A.	Spec. W.A.	Re-read	Punc.	Direct-ive	Group	Pass on	Other	Totals
One	H	13	23		2	1	2			3	5	49
	A	22	25		1	3		2	11		10	74
	L	32	58			6	2	7	5	3	10	123
Three	H	28	4		1	1			1			35
	*C L	19	15	1	2	2		1				19
Total grade one		67	106		3	10	4	9	16	6	25	246
Total grade three		47	19	1	3	3		1	1			75
Total sample		114	125	1	6	13	4	10	17	6	25	321

* Combined high-average group

a directive to the pupil to indicate that he had made a miscue. The intention behind the directive seemed to be that awareness would lead to self-correction. In some cases this behavior was a simple "no," while in other cases, the pupil was specifically directed to re-read all or part of the passage. While these first reactions were often successful, sometimes a second, third or even fourth reaction followed. It is obvious, however, from the increasingly fewer reactions recorded in Table 7.41 that the first and second reactions were usually successful.

Of course, the number of reactions necessary were also affected by the tendency for teachers to provide the next word in sequence when the first reaction was unsuccessful. Once the word was given, no other reaction was necessary.

These findings raise several issues. While teachers report that they invite pupils to read aloud so that they may better understand individual reading problems, and, therefore, offer specific guidance, the relations between the content of the pupils' miscues and the content of the teachers' reactions were obscure. If pupils were helped, it was because of the practice afforded by the oral reading. By having pupils read under direction, the teacher controls the practice, thus ensuring that it has been done.

There is, however, a question of accountability involved here. Was the teacher really necessary in oral reading situations in view of the evidence that peers were quite capable of helping readers in the same way that they were "helped" by teachers? If the answer to this question is yes, then it follows that teachers could be free to do other things which might lead to overall improvement of the reading program.

Table 7.41. Frequencies of Teacher Second, Third and Fourth Corrective Reaction Statements to Pupil Oral Reading Miscues for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Answers				Indicates miscue				General w.a.				Specific w.a.				Re-read				Punctuate				Directive				Group				Pass on				Other				Totals
		2		3		4		2		3		4		2		3		4		2		3		4		2		3		4		2		3		4						
One	H	2				1							1				6	1							3								1			1		15				
	A	4				1							2				5	1	1						4	1			1			1			1	1	18					
	L	12	3	1		3	1			1			5	1			5	5		1					14	2			5			7	4		6		59					
Three	H																																						4			
	A	1				1											1	2		1																						
	*C L	2				1							6				1	1	1						2	2			1	1	1	1					1	1	15			
Total grade one		18	5			4	2			1			8	1			16	7		1					21	3			6			9	4		8	1		92				
Total grade three		3				2							6				2	2		1					2	2			1	1	1		1		1	1		19				

A common complaint among reading teachers is lack of time. Yet, here is one situation where time could be made available to do those things which teachers are best prepared to do in the classroom.

Teacher Confirming Reactions to Oral Reading Responses

While we might anticipate some positive reaction from the teacher to the oral reading responses of those pupils who did well or when pupils managed to self-correct, in these classrooms only minimal confirmation was extended by the teachers. Self corrections were rarely reacted to by the teachers. In not encountering a corrective reaction, pupils apparently learned that their correction was acceptable and continued with their oral reading.

Teacher confirming reactions to oral reading responses are summarized in Table 7.42. The categories of teacher reactions identified for the analysis included: minimum confirmation, minimum praise, repetition of the pupil response, group praise, other and none. The results of the analysis show that at the grade one level, a large percentage of the oral reading responses, having no recorded miscues, received no confirmation from the teacher in excess of 60 per cent of the responses. At the grade three level the figure was lower, dropping to 43 per cent. At the grade one level, the average group responses were confirmed less often than are those of the other two groups and this holds true at the grade three level, although the number of reactions recorded limits the interpretation of the percentage figures.

Minimum confirmation statements such as "O.K.", "uh huh," and "yes" exceeded the totals of all other reactions. What is most important were the very few occasions when overt praise statements were offered.

Table 7.42. Frequencies and Percentages of the Different Teacher First Confirming Reactions to Pupil Oral Reading Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Categories of teacher confirming reactions							Totals					
		Min confirm f %	Min praise f %	Repeats response f %	Group praise f %	Other f %	None f %							
One	H	22	27	7	9	3	4	3	4	47	57	82		
	A	12	20	6	10	1	2	1	2	41	67	61		
	L	8	14	11	19	2	3	3	5	34	59	58		
Three	H	2	34	2	33					2	33	6		
	A	8	44	1	6					9	50	18		
	*C L	5	39	2	15			1	8	5	39	13		
Total grade one		42	21	24	12	6	3	3	2	4	2	122	61	201
Total grade three		15	41	5	14					1	3	16	43	37
Total sample		57	24	29	12	6	3	3	1	5	2	138	58	238

* Combined high-average group

The class level results were too limited to warrant discussion.

PUPILS' OPEN RESPONSES AND TEACHER REACTIONS

Responses which involved pupils answering in their own language, rather than reading, were generally identified as open responses, and categorized as

- (1) yes - no
- (2) correct or congruent
- (3) incorrect or incongruent
- (4) tangential to the solicitation
- (5) incomplete or incomprehensible
- (6) other, including lost data.

Each of these categories is explained in detail in the "Description of the FIER Categories" in Appendix L. For the purposes of the analysis, the correct and congruent categories were grouped, as were the incorrect and incongruent categories. In coding the data, it was found that the differences between these categories were no so clear as had been anticipated.

The grade level results for the different types of open responses are recorded in Table 7.43. While the number of reading responses were greater at the grade one level, the number of open responses were more nearly equal for the two grades. (Pointing up the emphasis on open responses in grade three, since only four classes were reported upon.)

Grade level differences in these specific categories of open responses suggest that third grade pupils made a greater proportion of incorrect or incongruent responses than the first grade pupils. Further-

Table 7.43. Frequencies and Percentages of the Different Types of Pupil Open Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Specific types of pupil responses						Totals
		Yes-No f %	Correct (congruent) f %	Incorrect (incongruent) f %	Tangential f %	Incomplete or incomprehensible f %	Other f %	
One	HAL	18 6	243 79	23 7	10 3	12 4		306
		13 5	202 79	17 7	9 3	9 3	5 2	255
		12 4	216 79	29 10	16 6		2 1	275
Three	HAL	14 16	59 68	8 9		5 6	1 1	87
		6 3	135 67	31 15	6 3	19 9	3 1	200
		12 8	98 63	14 9	11 7	19 12	1 1	155
		8 3	203 72	45 16	5 2	12 4	9 3	282
Total grade one		43 5	661 79	69 8	35 4	21 2	7 1	836
Total grade three		40 5	495 68	98 13	22 3	55 8	14 2	724
Total sample		83 5	1056 74	167 11	57 4	76 5	21 1	1560

* Combined high-average group

more, more of their responses were incomplete or incomprehensible. High groups in the first grade also recorded a greater proportion of incorrect or incongruent open responses. These findings suggest that pupils perceived as more able must respond to solicitations which they have difficulty handling. What cannot be judged here is whether the solicitations directed at the high groups were really that difficult, or whether they appeared to be more difficult simply because, by comparison, those directed at the other groups were too easy. This points up a need to determine the optimum difficulty level of solicitations that should be directed at pupils at different levels of ability.

Differences across the reading groups were not so great as they were for the reading responses. When the yes-no answers are included, approximately 85 per cent of the first grade open responses were acceptable. This finding lends support to an earlier conclusion that read responses leave pupils more open to corrective teacher reactions. While the range across the groups is somewhat greater at the grade three level, 84 per cent to 70 per cent, there it was the average group and not the low group which had the greatest difficulty responding in an acceptable manner.

While the low groups in both grades made the greatest percentage of incorrect or incongruent responses, this partly reflected the finding that the other groups made more tangential, incomplete, and incomprehensible responses. These would have been categorized as incorrect, if polar terms had been used. Of course, these response patterns also suggest that the two upper groups attempted answers, even though the results might have been incongruent or incorrect.

High groups at both grade levels responded more often than the

other groups with yes-no answers, reflecting the specific nature of some of the solicitations directed at them. Many conjecture questions, for example, would be responded to with yes-no responses, and it has been noted that high groups were asked more questions of this type.

The breakdown of the responses for the groups in the different classes did not add to the foregoing discussion and therefore the results are not reported.

Teacher Confirming Reactions to Pupils' Open Responses

Teacher reactions to open responses were first categorized as confirming, corrective, and extending. The extending reactions were of two types: those where the teacher reacted in an attempt to get the respondent to be more explicit or to add necessary information to his answer to meet the requirement of the solicitation (these extending reactions were essentially corrective); and those where the respondent was encouraged to add to a response which was acceptable in its own right (extending statements having value as confirming reactions). There was a fourth category for no reaction. The incidence of these reactions for the two grade levels and the reading groups are reported in Table 7.44.

The grade level data, independent of the groups, suggest that the confirming reactions of teachers involved approximately the same percentage of the total reactions for both grades. However, both corrective and extending statements of grade three teachers exceeded those of the grade one teachers.

First grade low groups were corrected more often and received fewer extending reactions from their teachers than did the upper two

Table 7.44. Frequencies and Percentages of the Different Teacher General Reactions to Pupil Open Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	General types of teacher reactions									
		Confirming		Corrective		Extending		None		Totals	
		f	%	f	%	f	%	f	%		
One	H	179	58	55	18	20	6	52	17	306	
	A	139	54	52	20	24	9	40	16	255	
	L	153	56	61	22	14	5	47	17	275	
Three	H	35	40	19	22	22	25	11	13	87	
	A	98	49	56	28	32	16	14	7	200	
	*C	74	48	46	30	20	13	15	10	155	
	L	168	60	71	25	19	7	24	8	282	
Total grade one		471	56	168	20	58	7	139	17	836	
Total grade three		375	52	192	26	93	13	64	9	724	
Total sample		846	54	360	23	151	10	203	13	1560	

* Combined high-average group

groups.

The major group differences were at the grade three level, where the percentages of confirming teacher reactions to high group performance were offset by the greater number of extending statements, and the possibility that they were less likely to receive any verbal reaction from the teachers. The comparison of the low and average group suggests that the average group received a smaller percentage of confirming reactions than the low group, but here too these were offset not so much by a greater percentage of corrective reactions but a greater percentage of extending reactions. In other words, while low groups had their open responses confirmed, they tended not to be encouraged to extend their responses. Put another way, the solicitations aimed at low groups apparently called for open responses which could be correct or incorrect, but which did not lend themselves to extension. Where the solicitations were themselves more complex and open-ended, as in the case of explanation and evaluation questions, the opportunities for the teacher to call for an extension of the response were more likely. Of course, teacher expectations may have been such, that they were content with the first responses of the low groups but felt obliged to have the higher groups explore questions in greater depth.

The data for the groups in the different classes are recorded in Table 7.45 and suggest some differences among the teachers in terms of their general reactions to open responses. Once again, Teacher II deviated most from the other teachers in the sample, in that she recorded so few reactions (reflecting the limited number of open responses solicited in her class). The low group in Class IV seemed to suffer most by comparison with the other two groups in that class,

Table 7.45. Frequencies and Percentages of the General Teacher Reactions to Pupils' Open Responses for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Types of teacher-general reactions								
		Confirming		Corrective		Extending		None		Total
		f	%	f	%	f	%	f	%	
I	H	69	68	10	10	5	5	16	16	100
	A	29	51	4	7	8	14	14	25	55
	L	60	65	10	11	3	3	19	21	92
II	H	7	44	4	25			5	31	16
	A							1	100	1
	L	2	67	1	33					3
III	H	49	62	11	14	8	10	11	14	79
	A	49	57	21	24	11	13	5	6	86
	L	52	58	17	19	8	9	12	13	89
IV	H	18	54	10	30	2	6	3	9	33
	A	21	57	8	22	4	11	4	11	37
	L	17	35	26	53	1	2	5	10	49
V	H	34	45	20	26	5	6	17	22	77
	A	39	52	19	25	1	1	16	21	75
	L	22	52	7	16	2	5	11	26	42
VI	H									
	*C	61	46	39	29	20	15	13	10	134
	L	24	83	2	7	1	3	2	7	29
VII	H									
	*C	12	57	7	33			2	10	
	L	33	50	20	30	5	8	8	12	66
VIII	H	19	33	15	26	15	26	8	14	57
	A	66	44	50	34	25	17	8	5	149
	L	20	51	11	28	7	18	1	3	39
IX	H	16	53	4	13	7	23	3	10	30
	A	32	63	6	12	7	14	6	12	51
	L	91	61	38	26	6	4	13	9	148

* Combined high-average group

since 53 per cent of the teacher's first reactions to their responses were corrective, compared with 22 per cent for the average group and 30 per cent for the high group.

In the third grade classes, the trend in the grade level data was maintained. That is, low group pupils received a higher percentage of confirming reactions but fewer extending reactions.

Beyond identifying teacher reactions according to these general categories, behaviors within these general categories were specifically identified.

Confirming reactions were identified as:

- (1) minimum confirmation
- (2) minimum praise
- (3) repetition of the pupil response
- (4) group praise
- (5) clarification and explanation of pupil response for the group
- (6) encourages extension
- (7) uses and expands upon pupil idea
- (8) acceptance of pupil answer.

In reacting to a pupil's open response, teachers could, of course, make a series of such statements in reacting. That is, while the teacher might first confirm the acceptability of the response, this confirmation could be followed by praise or some other specific statement. The briefest series would be something like "Yes, good," (confirming statement followed by praise). The data recorded in Table 7.46 concentrate upon the frequencies and percentages of the first confirming reactions of the teacher for the two grade levels and the different groups. The second confirming reactions are recorded in Table 7.47. (There were

Table 7.46. Frequencies and Percentages of the Different Types of Teacher Confirming Reactions to Pupil Open Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade group	Min. confirm f %	Min. praise f %	Repeats response f %	Encourages extension f %	Expands pupil idea f %	Group praise f %	Add explanation for group		Accepting f %	Other f %	Totals
							f %	%			
One	H	56 32	8 4	75 42	1 1	1 1	2 1	2 1	24 14	6 3	175
	A	54 39	6 4	62 45	2 1	2 1	1 1	1 1	9 6	2 1	138
	L	48 31	6 4	89 58	1 1	1 1	1 1	1 1	3 2	2 1	153
Three	H	13 37		16 46	1 3		1 3	1 3	4 11		35
	A	52 54	4 4	30 31			4 4	4 4	5 5		96
	*C L	34 47 75 46	1 1 21 13	20 27 51 31	1 1	1 1	2 1	4 5 3 2	14 19 10 6		73 164
Total grade one		158 34	20 4	226 48	4 1	4 1	4 1	4 1	36 8	10 2	466
Total grade three		174 47	26 7	117 32	2 1	2 1	2 1	12 3	33 9		368
Total sample		332 40	46 6	343 41	6 1	6 1	6 1	16 2	69 8	10 1	834

* Combined high-average group

Table 7.47. Teacher's Second Confirming Reactions to Pupil Open Responses for the Reading Groups at the Two Grade Levels.

Grade	Group	Type of reaction					
		Minimum confirm	Minimum praise	Repeats	Extend pupil idea	Accepting	Other
One	H	2	1	9	10	6	8
	A	11	1	8	5	9	5
	L	18	6	7	5	5	6
Three	H	2		3	3	4	4
	A	12	3	13	3	13	3
	C	3	3	5	4	7	3
	L	13	4	11	7	12	4

too few third and fourth reactions to warrant discussion.)

The most prevalent first confirming reaction of first grade teachers was to repeat the pupil's response. Teachers seemed to repeat responses for the group, thus indicating their acceptability and ensuring to whatever extent possible that all pupils had heard the response. What was interesting was that the repetition tended to replace overt statements of confirmation or praise. Grade three teachers, perhaps because their pupils responded in louder voices, confirmed responses by making minimal statements to that effect, including "yes," "O.K.," and "uh huh." Even at that, however, the figures show that grade three teachers also tended to repeat pupils' responses. In effect, overt praise statements such as "good," "fine," and "very good" were limited as teacher confirming reactions. There was a tendency on the part of the third grade teachers, over the first grade teachers, to rephrase the pupil's response, rather than repeating it verbatim. While there was a need on occasion to rephrase for the purposes of clarifying the answer, in some instances the intention seemed to be to correct grammatical difficulties. To this extent, the reaction really had a double intention, to confirm and to correct.

The accepting reactions were perhaps miscategorized as confirming reactions, for these reactions did not specifically confirm. Instead, the response was accepted and often turned back to the group to determine its worth. The teacher might suggest that an idea presented was interesting and deserved further exploration. This category is similar to the one identified by Flanders' Category 3 (Acceptance and use of pupil ideas). The analysis revealed that 8 per cent of the first grade reactions and 9 per cent of the third grade reactions were cate-

gorized as acceptance of pupil ideas.

When teachers added a second statement to their first confirming statement, the behavior most likely to be observed was one of the same categories that prevailed as a first reaction. That is, confirmation--repetition, or repetition--confirmation sequences were observed most often. In other words, the statements used in the confirming reactions, while they might vary in their specific content, as generalized behaviors remained very stable. In practice, second confirmation statements were not that prevalent and third statements were very rare. The few occasions when extended praise statements did appear in the transcripts revolved around the teacher suddenly reacting to a pupil response by reflecting upon the pupil's overall progress in reading, comparing his immediate performance with his past performance.

Group differences at the two grade levels offer some interesting insights. For example, the low group responses were repeated more often (58 per cent) than were those of high (42 per cent) and average groups (45 per cent). These results parallel the grade level findings where the grade one responses were repeated more often than the third grade responses. Apparently the responses of less able readers, for whatever reasons, were more likely to be repeated. While the finding itself offers no explanation, one could speculate that the greater the simplicity of the response, the more likely it is to be confirmed by being repeated. The response, while correct, apparently did not really deserve overt praise per se. This point is highlighted by the finding that the responses of the average group were greeted by specific confirmation reactions, while the high group responses were met more often by acceptance statements. Apparently, the responses of high group

pupils in grade one were such that they could be turned back to the group for further thought, if only to consider matters of agreement.

The different confirming reactions for the groups in the different classes are summarized in Table 7.48. These data suggest that the teachers were very similar in the ways they first reacted to an acceptable pupil open response, although at the first grade level there were some minor differences worth noting. Teacher II recorded very few confirming reactions since she allowed for so few open responses. Teacher III, of all the grade one teachers, depended most upon repetition of the response as the confirming reaction. Teachers I, III, and V accounted for the acceptance reactions which were recorded at the first grade level. Interestingly, the grade three teachers were very similar in their confirming reactions.

Teacher Corrective Reactions to Pupils' Open Responses

The revised FIER instrument allowed for sub-categories of teacher corrective reactions to pupils' open responses, including

- (1) no response
- (2) denial statements
- (3) specific directives
- (4) repetition of the solicitation
- (5) call for repetition of the response - in a question tone
- (6) request for more information
- (7) explanation of the unacceptability
- (8) acceptance with qualification (yes - but statements)
- (9) time to self-correct - possibly indicated by non-verbal reaction
- (10) reprimanding statement of a personal nature

Table 7.48. Frequencies and Percentages of the Different Teacher Confirming Reactions to Pupil Open Responses for Each of the Reading Groups in the Nine Classes

Class	Group	Types of confirming reactions									
		Min. confirm	Min. praise	Repeats response	Encourage extension	Expand on idea	Group praise	Add Explan.	Accept- ing	Other	Total
I	H	25	2	22		1	2	1	11	4	68
	A	12		15					2		29
	L	20	3	32			2		2	1	60
II	H	3		4							7
	A										
	L			2							2
III	H	6		36	1			1	5		49
	A	9		31		1		1	7		49
	L	11		38	1				1	1	52
IV	H	7	2	7							18
	A	9	2	9		1					21
	L	6	1	10							17
V	H	15	4	6					7	1	33
	A	24	4	7	2				2		39
	L	11	2	7		1		1			22
VI	H	8	1	12					3		24
	*C	26		18				4	13		61
VII	H	18	3	7							33
	*C	8	1	2			2	1	1		12
VIII	H	10		7	1				1		19
	A	35		22		1		2	4		64
	L	13	1	5					1		20
IX	H	3		9				1	3		16
	A	17	4	8				2	1		32
	L	36	16	27	1	1		2	4		87

* Combined high-average group

- (11) request for corrective response from the group
- (12) request to an individual member of the group to correct
- (13) other (includes lost data).

Each teacher reaction in the transcripts was examined in terms of these categories. However, several categories accounted for less than 5 per cent each of the observed behavior in the total sample (Table 7.49). At both grade levels, only 3 per cent of the corrective reactions involved teachers attempting to explain where the pupil had gone wrong. Similarly, directions for self-corrections were seldom explicitly stated at either grade level, nor were reprimands. While pupils were not called upon to correct very often, this reaction was more likely at the first grade level. In the third grade, the teachers tended to be more specific in calling upon a particular pupil to do the correcting. Grade level differences also show up in the "Request for more information" category, where third grade teachers rely on this reaction 15 per cent of the time and first grade teachers only 5 per cent of the time. This could reflect the general complexity of the responses at the grade level and the fact that more of those responses were identified as incomplete. Teachers would need to prompt pupils to add to and clarify their responses. In other words, here is another instance where the nature of the solicitation seemed to structure the conditions for the reaction of the teacher.

Teachers at both grade levels reacted correctively to open responses about 10 per cent of the time by repeating the solicitation. This repetition of the solicitation as a corrective reaction is interesting in that it opens a number of alternatives for both the teachers and the pupils. By repeating the solicitation, the teachers allowed for the

Table 7.49. Frequencies and Percentages of the Different Teacher First Corrective Reactions to Pupil Open Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of teacher corrective reactions										Totals
		None	Denial	Directive	Repeat solicitation	Repeat pupil response	Ask add. info.	Explain error	Yes-but	Self Correct	Reprimand	
		f %	f %	f %	f %	f %	f %	f %	f %	f %	f %	f %
One	H	9 16	12 23	3 5	9 16	6 11	4 7	5 10	10 18	1 2	1 2	55
	A	12 23	16 31	16 31	5 10	3 6	3 6	5 10	7 13	1 2	2 4	52
	L	12 20	2 3	2 3	5 8	8 13	2 3		8 13	1 2	2 3	61
Three	H	1 5	4 21	3 5	3 16	2 10	1 5	3 5	2 10	1 2	2 4	19
	A	1 2	13 23	3 6	4 7	1 2	9 16	3 5	7 12	1 2	1 2	56
	*C	11 24	16 22	11 15	4 9	4 9	7 15	2 4	7 15	1 2	1 2	46
Total	L	16 22			9 13	5 7	12 17	1 1	3 4			71
	grade one	33 20	11 6	19 11	17 10	17 10	9 5	5 3	25 15	2 1	5 3	168
Total	grade three	2 1	44 23	17 9	20 10	12 6	29 15	6 3	19 10	2 1	3 2	192
	Total sample	2 0	77 21	28 7	39 11	29 8	38 11	11 3	44 12	4 1	8 2	360

* Combined high-average group

possibility that the pupil did not hear the solicitation accurately and that this explained his problem. Secondly, the repetition of the solicitation allowed pupils an opportunity to compare their responses with the original solicitation so that they might self-correct. In effect, many of the corrective reaction categories allowed for self-correction even if it was not specified. For example, in denying the response, the intention probably was to draw the pupil back to a reconsideration of his response, thus giving him time and indicating a need for self-correction. The request that the pupil repeat his response where that response was unacceptable served the same purpose, since pupils often changed and corrected their responses the second time.

Few unacceptable responses were reacted to by the teacher as attempts to explore the root of the pupil's problem, as this might be reflected as an attempt on the part of the teacher to explain why the first response was unacceptable. Furthermore, even a cursory examination of these categories suggest that the main intention of the teacher was to get a correct response to the solicitation. If the respondent could not accomplish that task, another pupil was called upon to do so.

The number of corrective reactions were too few to allow for interpretation at the individual class and group levels and those data are not reported.

An obvious question relating to the interaction between the teacher and the pupil is to what degree the different responses were met by appropriate reactions. In Table 7.50 pupil responses are identified as Correct, Incorrect, and Other, and teacher first corrective reactions are examined in terms of these three categories of pupil response.

Table 7.50. Teacher Corrective-Type Reactions to Pupils Responses

Grade	Class	Nature of teacher reaction												
		Pupil response	Deny	Dir.	Repeat?	Ask for rept. info.	Add	Exp. err.	Yes but corr.	Self	Repr.	Gr.	Pass.	Other
One	I	Correct							1		1	1	1	2
		Incorrect	4	1	2	1			2	1		1	3	1
		Other		1	1		1		2					
	II	Correct	1											
		Incorrect	1		1									1
		Other	1											
	III	Correct	2	2	1	5			4					1
		Incorrect	7	2	2	3	1	1	1			1	2	5
		Other	1	1	2				2	1		3		3
IV	Correct			1	2	1	1	6		1			5	
	Incorrect	1	2	2	1		1	1			1	2	1	
	Other	2		4		1	1	2			2		3	
V	Correct	2			4	4	2	4				1	2	
	Incorrect	8	1	2				1		2	2		2	
	Other	3	1	1	1	1	1	2					3	
VI	Correct	1		1	3	1		3					1	
	Incorrect	4		1		2	2	1		1			2	
	Other	4	3	1	1	4	4	2	1			1	1	
VII	Correct	1		1		1	1						1	
	Incorrect	10		1	1	2	2				1		3	
	Other	2		1		1	1						1	
VIII	Correct			2	3	3		1					3	
	Incorrect	15		1		3	3	3	1			1	5	
	Other	4	6	2		7		3		2	2	2	2	
IX	Correct		2	2	2	2		2					1	
	Incorrect	3	4	8	1	1	1	1				2	6	
	Other		2		1	2		2					3	

It should be understood that the designation of a correct response was based upon an evaluation by the observer who considered the response acceptable in terms of the original solicitation. To best understand this relationship, the data have been presented separately for each teacher independent of the groups.

The most interesting finding must surely be the number of occasions when responses deemed correct by the observer were reacted to by the teacher with a corrective type reaction. Two interpretations are possible. The first is that the observer made an incorrect evaluation of the correctness of the pupils' responses. The second is that the teachers had some specific response in mind, and when pupils interpreting the solicitation differently, gave other responses, the teacher reacted correctively. Of course, the disagreement between the teacher and observer may also have reflected this possibility of ambiguity in the solicitation. The emphasis in the "yes-but" category might also reflect this ambiguity. The teacher, recognizing that the response was to some extent correct, tried to get the pupil to extend his answer to cover her original intention. Correct responses receiving corrective reactions are also more likely to be greeted by a request for repetition. While it may be that the response was simply not heard, the anecdotal records showed that pupils often hesitated before responding the second time, indicating that they perceived the teacher's request for repetition as possibly indicating that an error had been made. That so few correct responses were categorically denied would offer some support for this conclusion.

The data reported in Table 7.51 suggest that the teachers' reactions were for the most part successful in getting an acceptable res-

Table 7.51. Frequencies of the Different Pupil Responses to Teacher Corrective Reactions for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Types of pupil responses					
		Yes-no	Correct	Incorrect	Incomplete	Other	Total
I	H	1	2	1			4
	A		3	1			4
	L		2		3		5
II	H			1	1		2
	A						
	L		1				1
III	H	1	5			1	7
	A	1	9	1	3	1	15
	L		9	3			12
IV	H		3	1			4
	A		3			1	4
	L	2	3	7	3		15
V	H	2	5	1	2	1	11
	A	2	5				7
	L		1				1
VI	H						
	*C	3	12	1	5	2	23
	L						
VII	H						
	*C				1	1	2
	L		5	3		2	10
VIII	H	1	3	3	1	1	9
	A	1	12	7	1	3	24
	L	1	2		2		5
IX	H		3				3
	A		2	1	2		5
	L		15	3		2	20

* Combined high-average group

ponse, although not completely so. Even after the teacher's corrective reaction some pupils were still unable to meet the challenge of the solicitation. Unfortunately, these reactions were so few that an intensive analysis was not possible.

The data in Table 7.52 indicate that teachers continued to try to get the pupils to respond even after a second failure to make an acceptable response. When that failed, the group, or a member of the group, usually were requested to respond. It was clear that none of the teachers' reactions were specifically aimed at exploring the pupils' problem in responding. The whole emphasis was to get a correct response. If that first respondent failed then someone else was called upon to do it.

Teacher Extending Reactions to Pupils' Open Responses

The frequencies of extending reactions as defined for the purpose of the analyses were too limited to support anything but the most qualified discussion. However, for readers who may be interested in examining the data, the findings are included and discussed in Part 5 of Appendix N.

Teacher Structuring Behavior and Pupil Initiating Behaviors

The teacher structuring behaviors and the pupils' initiating behaviors are discussed in Parts 6 and 7 of Appendix N.

SUMMARY

In attempting the FIER analysis, the intention was to examine in-

Table 7.52. Frequencies of the Different Teacher Reactions to Pupil Attempts to Correct Their Open Responses for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Teacher reactions			
		Confirm	Corrective	None	Totals
I	H	1	3		4
	A	3	1		4
	L	4	1		5
II	H	1	1		2
	L	1			1
III	H	5	2		7
	A	8	5	2	13
	L	8	4		12
IV	H	3	1		4
	A	2		2	4
	L	2	11	2	15
V	H	6	3	2	11
	A	5	1	1	7
	L	1			1
VI	H				
	*C	6	15	2	23
	L				
VII	H				
	*C	1	1		2
	L	5	5		10
VIII	H	4	4	1	9
	A	9	10	5	24
	L	2	3		5
IX	H	2		1	3
	A	2	2	1	5
	L	11	3	6	20

* Combined high-average group

depth the content of the verbal interaction observed in primary reading groups. One concern was the description of the observed behavior and the second was to determine the differences, if any, that might characterize the two grade levels (one and three) and the reading groups at both grade levels. Unfortunately, as the analysis progressed, the explicitness of the descriptions was qualified by the fact that the behavior sample collected and analyzed was inadequate. While part of the problem was traced to the complexity of the instrument, had the resources of the investigator been greater, more data could have been examined.

As a result of these problems, the discussion focused on behavior categories that were more general than had originally been intended. In other words, it was necessary at different points in the process of the interpretation to regroup and subsequently reanalyze the data before the interpretation could properly proceed. For the same reasons, certain relationships considered important to the analysis could not be explored in as much detail as the behavior seemed to warrant.

Given these limitations, but recognizing the obvious need for research in the analysis of the teaching of reading, the supportable, pedagogically significant findings were reported in this chapter.

In examining the broad solicitation types it was clear that children in the two grades and in the different reading groups were asked to complete different reading-centered responses. In other words, there was an emphasis on different activities in the two grades and in the reading groups. The most obvious of these was the tendency for word perception tasks to be more prevalent in the lower groups, with the solicitations of the higher reading groups and the higher grade directed

more at the development of pupils' comprehension abilities.

The analysis of the specific behaviors subsumed under the broad solicitation types suggested that even when the same general category was recorded, the specific behaviors within the broad solicitation required that the higher and lower groups complete different tasks, with those of the low group tending to be less complex than those of the higher groups. Moreover, the solicitations of the low group required word level and oral reading responses, whereas those of the high group allowed for responses in the pupils' own language (open responses). These trends were also apparent when the first and third grades were compared.

The solicitations also elicited different basic response patterns which seemed to reflect the abilities of the readers, at least as judged by the teachers. That is, the more complex solicitations aimed at the high groups often resulted in the pupils being unable to comply, and required some prompting from the teacher. When the responses were simple, unison responses were accepted from the high groups.

In confining pupils' responses to word level, oral reading and open responses, the teacher was executing the power vested in her in the reading class. Since the teacher controlled the responses of pupils, she was, therefore, responsible to some considerable degree for the responses pupils made in the reading class. Put most simply, the teacher not only determined that the pupil should read aloud his response, but she also determined what should be read. Thus, if a child recorded a great number of miscues in making an oral reading response the problem rested as much upon the teacher as the child. For, had the child been asked to read a less difficult passage, fewer miscues and

fewer corrective reactions would have been recorded. What this points up is that the solicitations have a far reaching effect that influence not only pupils' responses, but teacher reactions as well.

In examining the groups, then, the most obvious difference, and this was revealed in the Flanders analysis too, was that low groups received more corrective reactions from the teacher. What the FIER accomplished was to trace that corrective behavior to the nature of the solicitations aimed at the different groups, thus describing the conditions that resulted in the patterns of verbal interaction characterizing the reading groups.

While the point was not stressed in the discussion, the overall patterns of behavior observed in these classes suggest that despite the reciprocal relations among the pupil responses and the teacher reactions, the interaction in the reading class is characterisitically a one-way pattern. That is, while it may not be important from a pedagogical point of view about the teaching of reading, what was missing in all these classes was any indication that discussion was taking place in the reading groups at either grade level. Instead, the group encounters led by the teachers, resulted in the lesssons focusing upon the teachers. They solicited certain behaviors, apparently having preconceived ideas about what constituted a correct response, and then reacted accordingly until the "correct" response was elicited from that original respondent or from some other pupil in the group. Once the "correct" response was achieved, the same pattern of interaction followed, and was repeated throughout the lesson. While pupils were prepared to correct their peers when they recognized that the response was not correct, beyond that, pupils had very little to say to each other.

While the question of the role of the teacher is at the basis of the above discussion, one other issue about the role of the teacher was raised by the findings in this chapter. If pupils are able to correct the oral reading responses of their peers in much the same way as the teacher does, is the teacher's presence in the oral reading setting as vital as it appears to have been perceived by the teachers in this study? What the FIER analysis seems to point up more than anything else is the need to attend more to the articulation of the dimensions of the role of the reading teacher especially as a curriculum decision maker. Perhaps, in the final analysis, that information would lead to the greatest improvement in the teaching of reading.

Lastly, the detailed descriptions presented in this chapter, while limited in their generalizability, served as the basic data for the development of the Observational System for the Analysis of Primary Reading Lessons which is presented in detail in the next two chapters. By having the data from the FIER analysis available, it was possible to build into the new system interpretative procedures that would insure that the most relevant reading behaviors were focused upon by the system.

CHAPTER 8

INTRODUCTION TO A NEW SYSTEM FOR THE ANALYSIS OF THE INTERACTION IN PRIMARY READING CLASSES

The intention of this study was to examine essentially the same sample of teacher-pupil verbal behavior during the teaching of reading from two analytical perspectives involving the application of Flanders' Interaction Analysis and the Focused Interaction Episode in Reading as two distinct techniques for analyzing and interpreting the observed behavior. As the study progressed the complementary contributions and limitations of the two approaches became increasingly apparent, and gradually the idea emerged that it might be possible to integrate certain elements from the two systems in order to develop a third observational system that would combine the best of both and have greater value in future studies of the analysis of the teaching of primary reading lessons. In this chapter the background decisions basic to the development of such an observational system are expanded upon, and the system arrived at is explained in detail as are the procedures for using the system.

BACKGROUND TO THE DEVELOPMENT OF THE READING INTERACTION ANALYSIS SYSTEM

Whereas the ten categories of Flanders' system were too broad to reveal the specific influences of the reading content of the lessons on the patterns of teacher-pupil verbal interaction studied, the FIER was designed specifically for that purpose. And, as the findings of

the previous chapter testify, the FIER analysis did generate a great deal of information about the different kinds of "reading behavior" observed during the reading lessons and how that behavior was reflected in the relations of teachers and pupils in the different reading groups in the grade one and grade three classes. The major problem of the FIER must be that its usefulness is severely restricted by the complexity of the reading category system and the complexity of the procedures necessary for the collection and interpretation of the behavior observed. The fact that typewritten transcripts had to be prepared before the analysis could proceed would undoubtedly restrict the use of the FIER in future research projects and would certainly mitigate against its use by teachers in the analysis of their own behavior. Even in the present investigation these complex procedures restricted the size of the sample of teacher-pupil verbal behavior drawn from the different classes and made certain interpretations impossible because the behavior sample was too small to support any discussion.

Another problem in using the FIER, which has been commented upon previously, is that it did not account for the time involved in the completion of an episode. Provision for the time factor would have required that the individual behaviors identified in each episode analyzed be timed separately, and that process would have been almost impossible under the study conditions. Yet, without some indication of the time involved even in the completion of an episode, there is no record of the emphasis on different behaviors in a given situation. Furthermore, the FIER analysis concentrated mainly upon those behaviors identified within the episode, including the different teacher soliti-tations, pupil responses, and teacher reactions. Therefore non-inter-

action reading behavior and non-reading centered behavior which would be a part of any normal reading class were not examined except in a cursory and limited descriptive manner.

These comments on the limitations of the FIER are not meant to fault its contribution to a better understanding of the teaching of reading, especially since the FIER analysis has revealed some very interesting insights into the differences in the behavior patterns of teachers and pupils in the different reading groups. However, it must be acknowledged that despite these contributions, as an instrument for the analysis of the teaching of reading, the FIER as constituted is not the answer. From the beginning it was recognized that in the field of reading there is a need for an efficient observational instrument for analyzing the teaching of reading, for without such a system our attempts to understand better the dynamics of the teaching of reading as this may eventually bring about improvement in the teaching of reading will not proceed far. It must be admitted that the investigator had hoped the FIER would serve this purpose, but once it was realized that this was unlikely, the search for a more viable system continued.

As the FIER interpretation progressed, it was recognized that in part, what the FIER was accomplishing was the identification of certain teacher and pupil verbal behaviors in the reading class that might serve as the basic criteria for establishing a category system specific to the teaching of reading but which could be used within the specifications of Flanders' observational system and could then be interpreted according to the procedures outlined for that system.

The idea of submitting a different set of categories for use with Flanders' basic system is not new, for there have been several

classroom observation systems developed which involved various revisions of the Flanders' categories while maintaining the observational procedures and the use of the matrix design for the interpretation of the findings. For example, the Verbal Interaction Category System developed by Amidon and Hunter (1967) and the Observational System for Instructional Analysis by Hough (1967) both depended upon the Flanders' procedures for categorizing teacher-pupil verbal interaction, but employed a different set of categories for categorizing the observed behavior. For example, Amidon and Hunter increased the number of categories in their system in order to differentiate certain behaviors within several of Flanders' general categories "in an attempt to overcome some of the limitations of that as well as other systems (p. 141, 1967)." Hough made some minor revisions of the original Flanders' categories and created several new categories in order that the system would be useful "for testing instructional hypotheses derived from learning theory (p. 150, 1967)." Hough specifically differentiated corrective feedback from criticism and rejection of pupils' ideas as two separate behaviors comprising Category 7 so that "the effects of corrective feedback on student learning may be distinguished from the effects of aversive stimulation (p. 150, 1967)." The important point here is that this research supported the possibility of identifying a set of categories specific to the orientation of the investigation but which could be used effectively with Flanders' system. If the other systems were viable, then it was reasoned that it should be possible to devise a category system that would be specific to the analysis of the teaching of reading and not just the general analysis of teaching.

In comparing Flanders' system with the FIER it was obvious that

the observational procedures and the suggestions for interpretation of the findings in the matrix design could meet a number of the limitations of FIER as cited in previous discussion. Observers, for example, should have little difficulty working with the new category system in the classroom situation provided they are well trained. As a result, neither audio-tapes nor typed transcripts would be necessary to the analysis. With the time and money saved, resources would be freed to concentrate upon the collection of a more comprehensive sample of classroom verbal behavior. Since Flanders' system is capable of accounting for all the observed behavior, and the FIER had made specific the kinds of behavior which would have to be accounted for in an all inclusive category system for reading lessons, the new system, too, should be able to account for all the observed behavior. Because on-going behavior would be sampled every three seconds and the sequence of the behavior maintained, the amount of any one behavior in a reading lesson could be recorded and then calculated as a percentage of the total observed interaction. Under these conditions the prevalence of or lack of any specific behavior in a particular lesson could be determined and the proportions of different behaviors compared. By using the matrix design, several different descriptions of the recorded behavior would be possible, either by examining the proportions of any one of the behavioral categories, the proportions of a specific group of categories, and/or by examining the interactive elements of the behavior as indicated by the build-up of behavior in specified cells or cell areas of the matrix according to the specifications of the study of reading behavior. That is, while Flanders was concerned with the indirect and direct dimensions of teacher behavior, Amidon and Hunter rejected the indirect and direct

concepts and concentrated upon the meaning of teacher initiated and teacher response behavior patterns. This suggested that other behavioral dimensions could be identified in the reading category system as needed.

Recognizing that the FIER had made specific the more important types of behavior that would have to be accounted for in the analysis of primary reading lessons and further recognizing the unique value of Flanders' observational scheme, the logical extension was to attempt to develop a set of categories specific to the teaching of reading which could be used efficaciously with Flanders' system. In the next section, the steps taken in developing that category system will be discussed, as will the procedures involved in using the system.

DEVELOPMENT OF THE INTERACTION ANALYSIS SYSTEM FOR PRIMARY READING LESSONS

During the early stages in the development of the category system it was predicted that a 10 category system would be too restrictive and that the 10 categories would necessarily be too broad to provide for a comprehensive all-inclusive analysis of teacher-pupil verbal behavior in the reading class context. The first question then was whether a larger category system would be viable as an observational system under normal classroom conditions. Fortunately, the literature revealed that larger systems had been used with success. For example, the Verbal Interaction Category System and the Observational System for Instructional Analysis referred to previously contained 17 and 16 categories respectively. Each investigator had indicated that well trained

observers had little difficulty handling the larger system of categories with high levels of reliability. A decision was made to try to limit the number of categories in the reading system to 15 or 16.

In attempting to identify an appropriate set of categories, the various revisions of the FIER and the findings from the FIER analysis were examined carefully. From these data it was recognized that the new category system would have to account for several broad areas of classroom verbal behavior in reading, including:

- (1) Teacher reading solicitation behaviors
- (2) Pupil reading response behaviors
- (3) Teacher reactions to pupils' responses
- (4) Teacher behavior in reading but outside the solicitation and reaction areas
- (5) Teacher non-reading centered behaviors
- (6) Pupil initiating interaction behaviors
- (7) Silence and confusion.

The FIER analysis established that much of the reading teacher's behavior was aimed at soliciting pupil responses to tasks which were intended to be specific to the pupil acquiring skills in reading, and that many of the subsequent teacher verbal behaviors were reactions to these solicited responses of pupils. Apart from the soliciting and reacting behaviors specific to reading the teachers also controlled the interaction through such behaviors as lecturing, giving directions, and making procedural statements related to the reading content. While the major focus of the verbal behavior seemed to be upon reading, some of the observed teacher verbal behavior was aimed at the management of the classroom as a classroom. Notices were read, other lessons were reflec-

ted upon, and some management and disciplinary statements were verbalized. These non-reading centered behaviors could sometimes take up a considerable portion of the class time and need to be accounted for in the observational scheme. In some classes, and especially in some groups, pupils initiated verbal interaction with the teacher or another pupil. While this initiated behavior might not be specific to reading, the system would have to provide for these initiations as opposed to pupil responding behaviors. Beyond the observed verbal behavior, there were indications that periods of silence (non-verbal activities) and confusion need to be accounted for by the system.

These seven broad areas of behavior provided the framework within which the specific categories of teacher and pupil verbal behavior in reading were to be examined. In focusing on the FIER analysis, several important solicitation behaviors were suggested, including:

- (1) those solicitations aimed at word perception skills such as the pronunciation and meaning of words in isolation and the other word analysis skills;
- (2) those solicitations aimed at the comprehension of the content of the selection or any printed materials used in the lesson, including questions on the written and pictorial content, pupils' knowledge and personal experiences brought into the discussion;
- (3) those solicitations which called upon pupils to read aloud (or silently) but where the reasons for the reading were not articulated.

Not all solicitations were covered by these three possible categories; however, since in some classes these categories clearly accounted for the vast majority of the observed teacher behavior it was decided

that at this preliminary stage in the development of the category system, one very general solicitation type simply entitled "other" would be used for any solicitations not accounted for in the specific descriptions given above. It was anticipated that this "other category" would be useful in identifying behaviors which might lead to revisions in the instrument, especially at different grade levels and in classes using a different approach to the teaching of reading.

These solicitation categories are acknowledged as very broad, yet they do focus on word perception, comprehension, and oral reading, three important areas identified in the FIER analysis. While each could have been further differentiated, if the category scheme was to be useful in the conditions of actual classroom practice, it was necessary to make certain decisions that would insure that the number of categories in the system remained limited. While these individual categories might only reveal very general insights, it should be remembered that they may be explored in somewhat greater detail by examining the relations among categories in the matrix design. For example, a comprehension solicitation followed by silence, oral reading, or any other behavior could offer some valuable insights into the more specific nature of the solicitation itself. Recognition of the role of the matrix in the interpretation of the observed behavior influenced a number of decisions made in the development of the category system. Of course, should an investigator choose to look at more specific behaviors within the context of any one of these solicitation categories, it is not impossible that further differentiations could be made and new categories identified for the special purposes in mind. One of the unique features of Flanders' system is this very flexibility offered in designing cate-

gories specific to the purposes of the study.

The FIER analysis had indicated that pupil responses would have to be specified in a number of different ways, including no response at all. No response would not require a separate category since the need for a "silence" category was predicted initially and would serve as a useful category for determining the percentage of no responses to solicitations since those cells in the matrix showing silence following the solicitation could be interpreted as "no response." It will be remembered that pupils tended to indicate that they could not respond by simply remaining silent. The three main types of pupil responses identified in the FIER analysis were word level reading responses, oral reading responses, and responses in the pupils' own language. These were modified in selecting the pupil response behaviors for the category system in that the following three types of pupil responses were identified:

(1) Oral reading responses: word level or longer

(2) Content-centered responses: where the pupil is expected to use information from the lesson, whether class discussion, teacher lecturing or the reading materials used are the source. (To some extent, these responses are controlled by the lesson content)

(3) Expression of the pupils' own ideas or opinions and information drawn from his own fund of general information: this category is used when a pupil is invited to use information in a new way, to reflect as it were upon the ideas.

While these different types of pupil responses were shown in the FIER to account for a large proportion of the observed behavior, there were two other pupil verbal behaviors requiring special category designa-

tions, including:

(1) Pupil unison responses: where more than one pupil responded at a time to the solicitation

(2) Pupil initiating verbal behavior: which may be directed at the teacher or at another pupil. (Where pupils offer unsolicited corrections to other pupils, this behavior category would be used.)

The teacher reaction categories were broadly identified according to the FIER analysis as:

(1) Teacher confirming reactions: which indicated that pupils' response behaviors or other contributions were acceptable

(2) Teacher extending reactions: where pupils were prompted to clarify and/or to add to their initial responses

(3) Teacher corrective reactions: indicating that pupil responses were not acceptable. (Pupils would be expected usually to change their behavior.)

Once again, it should be noted that the meaning of any one of these categories of behavior will rest ultimately upon the interactive patterns revealed in the matrix design.

While there were many different teacher behaviors which fell outside the solicitation and reaction areas of the FIER episode, in examining the data, the main criterion for identifying these behaviors was whether or not they were specific to the reading content of the lesson. For the purposes of the initial instrument it was decided that two categories could accommodate these behaviors, including:

(1) Reading centered non-interactive teacher verbal behavior: to be specified in a way similar to Category 5 (Lecturing) in the Flanders' system. This category would identify teacher behavior

specific to the reading context where the teacher took time to express her own ideas, to make procedures explicit, to dictate exercises, or to simply pose rhetorical questions. Where the teacher lectured on certain aspects of reading or made information available to the pupils this category would be used.

(2) Non-reading centered teacher behavior: any teacher behavior not directed to the reading content of the lesson would be classified in this category. Included would be notices read, procedural statements, criticism not aimed at the correction of reading behavior responses of pupils, or any other non-reading centered behavior that might be observed during the course of the lesson.

Since silent reading can be an integral part of the reading lesson, the silence and confusion category would be broken into two categories, including:

- (1) Silent reading
- (2) Silence and confusion.

This section has provided a very general overview of the kinds of behaviors that were suggested by the FIER analysis as basic to the development of a set of categories specific to reading but which could be used to advantage with the Flanders' system. In the next section each of the 16 categories is explicitly described so that observers may be clear about the dimensions of each.

Description of the 16 Categories

The 16 categories devised for the initial system are described and explained in detail in this section.

Category 1: Word perception solicitations. Any teacher question

or directive aimed at the development or review of pupils' skills in translating printed symbols to their oral equivalents would be categorized as a word perception solicitation. This category would include any solicitation involving phonics, structural analysis, dictionary usage, or any other word recognition skill. Where there is no specific verbal directive such as in the case of flash card drills, a Category 1 should be inserted for each word presented. If blackboard or printed exercises are used to develop these skills then directives to complete the appropriate exercise would be recorded here, so long as a verbal pupil response was called for in the solicitation.

Category 2: Comprehension solicitations. Any question or directive aimed at soliciting a response from pupils which calls for an understanding of or ability to interpret or integrate information from the context of the written materials would be recorded as a Category 2 behavior. If the written materials are exercise materials aimed at developing these abilities then a question or directive that pupils complete such exercises verbally would be accounted for by this category. If a lesson should depend primarily on these types of materials a note should be made to this effect, following Flanders' procedures for explaining the specific nature of any lesson.

Category 3: Oral reading solicitations. Any solicitation which calls for a reading response, except for those identified as Category 1 and 2 solicitation behaviors would be recorded as Category 3. That is, the oral reading category is used only when the oral reading is called for without any emphasis on a purpose for reading aloud except for its own sake or to generally determine "what was said." Audience situations or emphasis on expression in the solicitation would therefore require

that the behavior be recorded as a 3. A specific directive that pupils read silently would also be classified here, if no purpose was set for the reading except that the pupils find out what was said in the passage. If the silent reading is prompted by a specific question then one of the other solicitation categories should be used.

Category 4: "Other" solicitations. There is no doubt that this is a "catchall" category at this point in the development of the category system in that this category is included to record behavior that falls outside Categories 1, 2 and 3. In any class where a large number of solicitations are identified as Category 4, the observer should note the reasons for this, so that the information may be available for revising the solicitation categories.

Category 5: Teacher reading-centered lecture type behavior. Teacher behavior aimed at the reading aspect of the lesson but which is not directed at involving pupils in interaction would be categorized here. Examples of this behavior would be those instances where teachers lecture or discuss the story content or aspects of it in terms of their own opinions, ideas, and experiences; where teachers add knowledge which is apparently meant to enhance pupil understanding; where teachers give procedural directives for completing independent work; where teachers read aloud to pupils; and where there is teacher dictation related to the completion of reading exercises. In terms of the latter, the lecture category would be used when pupils are expected to write down rather than verbalize their answers. If responses are verbalized, then depending upon the nature of the exercise, one of the solicitation categories would be used.

Category 6: Non-reading-centered teacher behavior. Any teacher

verbal behavior which is not specifically aimed at reading would be identified in Category 6. In any reading class, not all the observed behavior would be specific to the reading content of the lesson. Teachers may make general announcements; they may discipline pupils for their general behavior; they may direct pupils to do other activities such as the collection and distribution of materials and so on. By recording a 6 at three second intervals, a record of the proportion of class time taken up by the non-reading behavior would be available. In some classes this behavior may account for a significant part of the interaction and therefore needs to be accounted for in an all inclusive system.

Category 7: Teacher confirming reactions. Where the teacher indicates through acceptance or praise or in any other way that the pupil's response is acceptable, a Category 7 should be recorded. Even brief responses such as "uh huh," "o.k." and "yes" would be recorded as confirming behaviors if they were aimed at the acceptance of the pupil's response. Where pupil responses are repeated by the teacher for the group, the repetition would constitute a confirming reaction.

Category 8: Teacher extending reactions. If a teacher reacts to a pupil's response by attempting to get the pupil to extend or clarify his answer, this behavior would be classified as a Category 8. Extending behaviors which are clearly corrective such as "you'll have to say more than that" should be recorded as a Category 9 as described below.

Category 9: Teacher corrective reactions. Any reaction which indicates to a pupil that his response or lack of response is not acceptable should be recorded as a Category 9. This would include those instances where the teacher provides information to the pupil so that

he may continue with his response, such as saying the next word in the oral reading sequence. If a teacher calls upon another pupil to provide the correct or acceptable response for the pupil then that behavior would be recorded as a corrective behavior, and the pupil's response as one of the response categories (10, 11, 12, 14 below).

Category 10: Pupil content responses. Any response which requires that a pupil use information from the written materials used in the lesson, or information specifically disseminated in that lesson (or a previous lesson if this is known -- such as word analysis principles) should be identified as content-centered responses and recorded as a Category 10.

Category 11: Pupil self-expression responses. Whenever the pupil is allowed to present his own opinions or to draw upon his store of general information and personal experiences in responding to a solicitation the response should be categorized as a Category 10. If the pupil is called upon to respond to some non-reading centered behavior from the teacher then that response would be recorded in this category too if the teacher behavior was very general.

Category 12: Pupil oral-reading responses. If the pupil reads aloud his response to the teacher's solicitation, then the response should be recorded as a Category 12, except where the materials being read have been composed by the pupil himself. Where the materials were written by the pupil then the response should be categorized as an 11 (Self-expression) if the ideas are essentially his own and as a content response (Category 10) if the response has been written as an answer to a comprehension question requiring an answer based on the materials in a selection.

Category 13: Pupil silent-reading responses. A category 13 should be recorded for each three second interval that a pupil or group of pupils read silently.

Category 14: Pupil unison responses. Where more than one pupil responds, either at the teacher's invitation or as a matter of usual behavior, the group response, whether read or expressed in the pupils' own words would be recorded as a Category 14.

Category 15: Pupil initiating behavior. If the pupil initiates the interaction with the teacher or another pupil by asking a question or submitting unsolicited information, that behavior is categorized as 15. The behavior need not be centered upon the reading context since the responses of teachers which are not reading centered will be recorded as a Category 6 and the relations can be examined in the matrix. If the interaction is between two pupils, the response of the other pupil should also be recorded as a Category 15, but with a 16 recorded before the second pupil's behavior is recorded. If a pupil corrects another pupil this should be indicated by the pupil's response being categorized as a continuation of his response to the teacher solicitation, such as continuing to read orally (Category 12).

Category 16: Silence and confusion. A Category 16 should be recorded for each three seconds of silence, except where pupils are reading silently. Where it is impossible to analyze the interaction because there is too much going on at once, this category should be used at three second intervals.

The Categorization Procedures

The procedures for categorizing the observed verbal behavior using

these 16 categories for the analysis of reading lessons are essentially the same as those proposed by Flanders for the Interaction Analysis system.

(1) The observers should familiarize themselves with each of the categories and then practice using the categories with samples of reading lesson teacher-pupil verbal interaction behavior until they are proficient enough to record the appropriate category expressing the ongoing interaction under normal classroom conditions.

(2) A category number is recorded, in sequence, at three second intervals. If the observed behavior extends beyond three seconds, the same category continues to be recorded every three seconds. If the behavior changes within the three second interval, the category number corresponding to the new behavior is recorded.

(3) Marginal notes should be made whenever there is a need to explain the general nature of the lesson content as this may help later interpretation. Should the investigator be required to compare interaction patterns within different types of reading lessons or different types of teaching activities, the anecdotal record should indicate the changes in lesson content whenever necessary.

The Categorization Ground Rules

Just as Flanders specified certain ground rules to meet some of the problems arising from the complexity of the categorization procedures, there are several rules which should govern the decisions to be made in using the 16 categories for reading. The rules discussed here are preliminary and it may be expected that should the method be used to any extent, further rules may be required, especially as these are necessary

to making careful discriminations of the category designations of observed behavior in situ. Some of these rules have been indicated in passing in the previous section but are set forth here to guide the observer in training and in using the system.

Rule 1. When in doubt about the category corresponding to the observed behavior, the observer should choose the category which will provide the greatest amount of information. In terms of the solicitations for example, the "other" category (4) should only be used when the behavior is clearly not in the areas of Word perception (1) Comprehension (2) or Oral reading (3). The oral reading category should be used only when it is clear that the intention of the oral reading is not clear.

Rule 2. If there is any doubt about the purpose of the oral reading solicitation being made explicit, the oral reading solicitation category (3) should be used. The rationale here is that if the observer is unsure of the purpose of the solicitation calling for an oral reading response, then it would not be unlikely that the pupils may be uncertain as well.

Rule 3. In deciding upon a confirming reaction (7), an extending reaction (8), or the corrective reaction (9), the observer, while not attempting to second guess the teacher's intentions, should consider how the pupil might perceive the reaction, and categorize it from that point of view.

Rule 4. If there is doubt regarding the content-centered responses compared with the self-expression response, the content-centered category should be used.

Rule 5. Some unison responses may be close to confusion in that a number of pupils seem to be calling out different answers. If the different responses are clearly audible and relate to the solicitation then the unison response category (14) should be recorded and not a category 16 for silence and confusion.

Rule 6. Each change in behavior should be recorded regardless of the three second interval.

Rule 7. Pupil initiated behaviors which are corrective of a peer should be recorded as a 15 (Pupil initiating behavior). Where the teacher and a pupil respond correctively to the reader at the same time, the pupil behavior should be recorded. If the teacher extends the corrective reaction beyond the first behavior a Category 16 should be inserted between the pupil corrective behavior and the teacher's extended reaction. The following sequence shows this more clearly.

Observed behavior	Category
(1) pupil is reading aloud and makes a miscue	12
(2) peer and teacher correct	15
(3) conventional 16	16
(4) teacher continues to correct (3 sec.)	9

Rule 8. If a pupil hesitates in reading orally for longer than three seconds before he self-corrects or is corrected, a Category 13 (Silent reading) should be recorded. The rationale for this is that the pupil may be reading silently in order to correct himself.

Rule 9. If a pupil's initiating behavior is ignored by the teacher in that the teacher launches into another behavior, a Category 16 should be recorded between the pupil's initiating attempts and the teacher's next observed behavior. By inserting the 16, the build up in the 14-16 cell in the matrix will show how pupils' unsolicited contributions are received.

Recording the Data in the Matrix

The Flanders' procedures outlined in detail in Appendix F and Chapter 5 should be followed in recording the observed behavior categories in the matrix, except that a 16 by 16 matrix is required to accommodate the larger number of categories. Separate matrices may be tabulated and compared according to the specifications set forth by Flanders, although the specific interpretations would differ in line with the differences in the category designations.

Interpretation of the Matrices

Once the tallies have been recorded in the matrix and the totals for each cell and column are calculated (see Figure 8.1) the first step in interpreting the matrix data is to calculate the percentages for each category by dividing the column totals by the total number of tallies in the matrix. This computation gives the proportion of the total behavior accounted for by each of the 16 behaviors identified. These

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(Word Percept.)	1	3											3				
(Comprehension)	2		2								7				3		
(Reading)	3												3				
("Other")	4											1					
(Reading Lec.)	5					2										1	1
(Non-read.)	6		1														
(Confirm React.)	7	1	7	3	1			2								2	3
(Ext. React.)	8										2						
(Corr. React.)	9												4				
(Cont. Resp.)	10							7	1		2	1					
(Self-Exp. Resp.)	11								2			2					
(Oral Read. Resp.)	12							6		5			9			1	
(Sil. Read. Resp.)	13																
(Unison Resp.)	14		1					2									
(Pupil Init.)	15					1	1	1					1				
(Silence, Confus.)	16	1	1			1											3
TOTAL		3	12	3	1	4	1	18	3	5	11	4	20	0	3	4	6
%		3	12	3	1	4	1	18	3	5	11	4	20	0	3	4	6

Total Tallies 99

Teacher-talk (Categories 1-9):	<u>50</u>	percent
Pupil-talk (Categories 10-12, 14, 15):	<u>42</u>	percent
Silence & Confusion (Categories 13, 16):	<u>6</u>	percent
Teacher solicitations (Categories 1, 2, 3, 4):	<u>19</u>	percent
Teacher reactions (Categories 7, 8, 9):	<u>26</u>	percent
Pupil non-reading responses (Categories 10, 11):	<u>35</u>	percent
Pupil reading responses (Category 12):	<u>20</u>	percent

Fig. 8.1. A Hypothetical 16 by 16 matrix showing the percentages in defined areas

proportions are indicated in the hypothetical matrix (Figure 8.1).

The relative amounts of teacher-talk, pupil-talk, and silence and confusion which are indicated in the sample matrix (Figure 8.1) are calculated as follows:

(1) Teacher-talk: Categories 1 to 9 are combined and then divided by the total number of tallies in the matrix.

(2) Pupil-talk: Categories 10, 11, 12, 14, 15 are combined and then divided by the total number of tallies in the matrix.

(3) Silence and Confusion: Categories 13 and 16 are combined and then divided by the total number of tallies in the matrix.

It is also possible to identify the amount of teacher-talk, pupil-talk and silence and confusion according to the proportions of the specific behaviors identified within these broad areas by dividing each of the combined totals identified above by the number of tallies for each separate category. For example, the sum of the tallies for silence and confusion and silent reading might be 100. If 80 of these 100 tallies were recorded as Category 13 (Silent reading) then 80 percent of the silence and confusion in the observed lessons would have involved pupils reading silently.

It is also possible to compare areas of the matrix to answer specific questions pertaining to the content of the interaction. For example, the revised reading categories were derived from several broader categories including:

- (1) Teacher solicitation behavior (Categories 1, 2, 3, 4)
- (2) Teacher reaction behavior (Categories 7, 8, 9)
- (3) Teacher non-interactive reading behavior (Category 5)
- (4) Teacher non-reading-centered behavior (Category 6)

- (5) Pupil response behaviors (Categories 10, 11, 12, 14)
- (6) Pupil initiating behavior (Category 15)
- (7) Silence and confusion and Silent Reading (Categories 13, 16).

Each of these general areas could be explored by combining the categories as designated and calculating the percentage of the total interaction involving each. Where only one category is involved this procedure would already have been accomplished in the column percentage calculations. Several general areas involving more than one category are identified in the sample matrix in Figure 8.1.

Where required for the purposes of the analysis, ratios could also be calculated. For example, it could be that the ratio of confirming to corrective teacher reactions may be an important factor in the analysis of verbal behavior in reading groups, at least as indicated by the FIER findings.

Beyond the analysis of the total proportions of the observed behaviors or the composite analyses involving two or more categories, it is also possible to interpret certain areas within the matrix. In effect, any area of the matrix comprised of one or more cells may be examined. As in the case of the Flanders analysis the areas of the matrix may also be compared with those in another matrix.

Several areas within the matrix which may be of special importance in analyzing the differences in the patterns of behavior across the different reading groups or classes are indicated below. While it is usual to specify areas by referring to a total matrix and then marking out the areas under discussion, the arrangement of the reading categories is not so logical as those in the original Flanders system and therefore this discussion will focus on defined areas drawn out of the general

matrix pattern.

Area A. The types of responses to the different solicitations may be determined by examining the build-up of tallies in the cell area shown in Figure 8.2.

For example, in examining the cells 2-10, 2-11, 2-12 and so on it is possible to determine whether or not the emphasis in the comprehension solicitations was on having pupils read words or phrases aloud (Column 12); whether pupils were re-stating information presented in the lessons (Column 10); or whether pupils were using or reflecting upon the skills in their own thought patterns (Column 11). The build-up in the Silence category (16) would give some indication of the degree to which pupils were able to respond to the solicitations asked of them. Also, each of the specific solicitations and the responses to these solicitations could be identified as an area of the matrix and examined separately. For example,

(a) Responses to Word perception solicitations

	10	11	12	13	14	15	16
1							

(b) Responses to Comprehension solicitations

	10	11	12	13	14	15	16
2							

(c) Responses to Oral reading solicitations

	10	11	12	13	14	15	16
3							

(d) Responses to "Other" solicitations

	10	11	12	13	14	15	16
4							

Row	Column						
	(Pupil Responses)						
(Solicitations)	10 Content	11 Self- expression	12 Oral reading	13 Silent reading	14 Unison	15 Pupil initiates	16 Silence
	1 (Word Perception)						
	2 (Compre- hension)						
	3 (Oral Reading)						
4 ("Other")							

Fig. 8.2. Identifying Area A in the matrix

Area B. In Area A attention was directed at the nature of the pupil responses to the teacher's solicitations. In Area B, teacher reactions to pupils' responses may be examined. This area of the matrix consists of the cells involving Rows 10, 11, 12, 13, 14, 15, 16, (the pupil response categories) and Columns 1-9 which are the categories into which any of the teacher behaviors following a pupil response may fall. That is, not only are the specific teacher reaction categories included but all categories, since the teacher may not specifically react to a pupil response but may move directly to another solicitation (see Figure 8.3).

		Column						
		10	11	12	13	14	15	16
Row	1							
	2							
	3							
	4							

Fig. 8.3. Identifying Area B in the matrix

Of course, within Area B any of the pupil responses may be examined in relation to the specific types of teacher behavior which may follow. Or, only the reaction cells may be considered depending upon

the discussion. For example, if interest was in the reaction categories, then the area of the matrix to be defined would include those categories identified by Rows 10-16 and Columns 7, 8, and 9. The area of the matrix could be further delineated to account only for the reaction behaviors in relation to a specific category of pupil responses, such as cells 10-7; 10-8; and 10-9.

Not all pupil verbal behaviors involve pupils responding to teacher solicitations since there is also some freedom in the class for them to attempt to initiate interaction. The types of teacher behaviors which follow pupil initiating behaviors can be examined by exploring the teacher verbal behaviors (Columns 1-9 and 16) in relation to pupil initiating behavior (Row 15) as follows:

	1	2	3	4	5	6	7	8	9	16
Row 15										

In examining the build-up of tallies in different cells it would be possible to determine whether pupil initiating behaviors

(a) met with silence (or were not reacted to)

	16
15	

(b) met with criticism

	9
15	

(c) met with confirmation

	7
15	

(d) teacher called for more information

	8
15	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>

(e) were unrelated to the reading task

	16
15	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>

(f) were requests for information about the reading lesson.

	5
15	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>

The amount of pupil initiated corrective behavior could be determined by examining the build-up in the 12-15 cell.

These are but a few of the areas of the matrix which can be predicted as having meaning in the analysis of reading lessons. It is anticipated that once the system has been used to examine the interaction in a number of reading classes new areas of the matrix having special meaning in the interpretation of the patterns of interaction will become clearer.

SUMMARY

This chapter has outlined the development of a set of teacher-pupil verbal behavior categories and the manner in which they may be used within the framework of Flanders' Interaction Analysis system specifically for the analysis of reading lessons. Essentially, the purpose in developing this revised set of categories has grown out of a perceived need for such a system in the field of reading.

All that has been stated in this chapter is purely theoretical and

reflective, for the value of a system such as the one proposed here must rest ultimately on its use in practice and eventually upon the insights into the teaching of reading it provides. Until the system has been tried out and the findings interpreted, any comments on its practical value must be purely speculative. Ideally, the system should be used in reading classes under regular classroom conditions and the data subsequently analyzed. Unfortunately, a full scale study was beyond the resources of this investigation; however, the set of audio-tapes and typewritten transcripts from the main body of the study were available and it was decided that these could be used for a trial run of the proposed system. While this meant a modification in several of the procedures recommended, at least there would be some opportunity to test out the categories to determine whether it would warrant taking the revised system out into the classrooms and all that that would demand by way of training observers and interruptions in routine classroom procedures.

In the next chapter, the design of a pilot study for testing the system and the findings of that test are described and discussed in relation to the interpretative processes suggested in this chapter. While the observational procedures have been modified it will be appreciated that this pilot investigation was carried out as an exploratory study of the viability of the system and not as an analysis of the reading classes involved.

CHAPTER 9

REPORT OF THE PILOT INVESTIGATION OF THE OBSERVATIONAL SYSTEM FOR THE ANALYSIS OF PRIMARY READING LESSONS

The design and findings of an exploratory study of the value of the revised reading categories within Flanders' observational model for the analysis of classroom verbal behavior in reading are reported and discussed in this chapter. At the outset, it should be understood that there were certain limitations imposed upon this investigation because of the very limited resources of the investigator. Despite those limitations, which are discussed in detail in following sections, it was decided that the preliminary study warranted some discussion, especially since the analysis was a logical extension of the two major analyses -- Flanders' Interaction Analysis and the Focused Interaction Episode in Reading.

THE VERBAL BEHAVIOR SAMPLE

In order to provide some breadth in the sample of verbal behavior from the nine observed classes, up to ten minutes of verbal interaction from each of three lessons (observations 2, 3 and 4) for each group were analyzed with the reading categories. In most instances, these ten-minute segments were comprised of three minutes of interaction at the beginning of the group lesson, four minutes from the middle of the group lesson, and three minutes from near the end of the group lesson. In the case of the shorter lessons, the ten-minute segment might have taken in

the whole lesson or was put together from the shorter group encounters over the morning period. In several cases the sample was less than ten minutes because the lesson was too short.

MODIFICATION OF THE OBSERVATION

RECORDING PROCEDURES

The "observer" in this study was completely familiar with the rationale behind the revised reading categories and was thoroughly familiar with the category descriptions. However, she was not trained to use the reading categories under normal classroom conditions nor to follow the verbal interaction from audio-tape recordings of classroom verbal events. In order to avoid the time, energy, and money involved in training the "observer" to a high level of competency under normal classroom conditions, the following modified procedures were followed.

First, the audio-tapes were used in conjunction with the verbatim transcripts to identify each of the reading behaviors observed according to the three-second conventions. That is, each three-second interval and/or each change in verbal behavior was marked out on the transcript by a slash procedure. An example of a page drawn from the transcript record showing the timed sequencing is included in Appendix O.

Second, once the transcripts had been coded according to the three-second intervals, the "observer" examined and subsequently categorized the observed behavior according to the 16 reading categories. The category descriptions and the predictable ground rules were consulted throughout that analysis. As the analysis progressed certain of the ground rules became more clearly established and others were

added.

Following these categorization procedures, a matrix was tabulated for each segment and then a composite matrix for the total observation period was prepared for each group in each class.¹

Undoubtedly, the most questionable aspect of this procedure was that the reliability of the coding was not carefully established. It could be argued, however, that if observers can become highly reliable in using 16 and 17 category systems under the pressures of the classroom, then an "observer" working with timed transcripts, who knew the categories well and had the category descriptions available for ready reference would probably be a reliable observer. Under these conditions, the observed behavior was at least suspended in time, and could be scrutinized carefully and objectively.

While 30 minutes of observation provides a very limited sample of behavior, it is believed that the procedures established for identifying the segments assured to some extent that the behavior analyzed was representative of the lessons observed.

INTERPRETATION AND DISCUSSION OF THE

FINDINGS OF THE ANALYSIS

Once the matrices had been tabulated, the proportions of the different behaviors represented by the 16 categories were com-

¹ The original matrices are available from the investigator on request.

puted,¹ as were the proportions of behavior in each of the following areas of the matrix:

- (1) Teacher-talk (Categories 1-9)
- (2) Pupil-talk (Categories 10-12, 14, 15)
- (3) Silence and Confusion (Categories 13, 16)
- (4) Teacher solicitations (Categories 1, 2, 3, 4)
- (5) Teacher reactions (Categories 7, 8, 9)
- (6) Pupil non-oral reading responses (Categories 10, 11)
- (7) Pupil oral reading responses (Category 12).

Analysis of the 16 Reading Categories

In this section, each of the 16 reading categories is discussed in terms of the behavior observed in the different reading groups in the grade one and grade three classes. The findings are discussed in relation to the Flanders and FIER analyses in order to point up some of the unique contributions of the reading system.

Category 1: Word perception solicitations. The proportions of behavior in Category 1 (word perception solicitations) are reported in Table 9.1. These data suggest that where word perception solicitations were recorded, the proportions tended to be higher in the low groups at both grade levels, with the exception of Class III where more word perception solicitations were recorded for the high group. This finding supports, or at least reflects, the FIER finding that the low reading

¹ The computer program available at the time of the pilot investigation would not handle a 16 by 16 matrix. All tabulations and calculations reported in the pilot study were therefore completed by hand. A program which will handle the larger matrix is now available and would greatly facilitate the future use of the reading categories system.

Table 9.1. Proportions of the Total Behavior Recorded for Category 1 (Word Perception Solicitations) for the Reading Groups in the Nine Classes

Grade	Class	Percentage of Category 1 behavior		
		High group	Average group	Low group
One	I	6	3	14
	II	2	3	1
	III	7	1	2
	IV	0	1	2
	V	5	8	10
Three	VI		0	2
	VII		4	9
	VIII		7	7
	IX	0	11	13

group lesson content was directed toward an emphasis on the different types of word perception tasks.

These data also suggest, as did the FIER findings, that there were apparently differences in the emphases on word perception activities across teachers who reported they were teaching reading using the basal reading approach. If a larger sample of behavior had been drawn from a greater number of classrooms (a distinct possibility if the revised reading category system were used) it could be determined more reliably just how great the differences are among basal reading teachers, at the same grade level, across the grades, and especially in terms of the different reading group levels. The ranges across teachers and groups in this sample, for example, were:

	High group	Average group	Low group
Grade one	0-7%	1-8%	1-14%
Grade three		0-11%	2-13%

Certainly, these highly visible differences raise some interesting questions about how the basal reading approach is articulated in practice in different classrooms.

The tendency for word perception solicitations to be emphasized more in the low groups also raises some interesting questions about the efficacy of this emphasis in the development of low achievers' reading abilities. The use of the revised reading categories in a larger study might prove useful as a viable procedure for looking at this dimension of the content of reading lessons and subsequently in the consideration of pupil performance. It is not impossible that the word perception category could even be subscribed to provide for more detailed informa-

tion in such a study. One of the advantages of keeping the basic system down to 16 categories is that several categories could be added as needed, yet the system would still be a viable one since there are reports of reliable systems up to 20 categories.

Category 2: Comprehension solicitations. The findings for the comprehension solicitations for the different groups are summarized in Table 9.2. The results clearly support the conclusion suggested by the FIER findings that at both grade levels, the high and average groups were characterized by a greater proportion of comprehension solicitations than were the low groups. In Class VI the difference was most pronounced with 24 percent comprehension solicitations for the combined high-average group compared with only 4 percent for the low group. More obvious is the fact that in Class II comprehension solicitations were not aimed at any of the reading groups.

The analysis has also captured the differences across the class and grade levels as indicated by the following ranges in the proportion of behavior in this category:

	High group	Average group	Low group
Grade one	2-16%	0-15%	1-7%
Grade three		4-24%	4-7%

As interesting as these ranges are, what is more interesting is that within these observed differences, the trend across the reading groups is fairly stable. Apparently, whether a teacher asks more or fewer comprehension solicitations, more will be asked of the high group, fewer will be asked of the average group, and even fewer of the low group. What this means in terms of the reading achievements of pupils

Table 9.2. Proportions of the Total Behavior Recorded for Category 2 (Comprehension Solicitations) for the Reading Groups in the Nine Classes

Grade	Class	Percentage of Category 2 behavior		
		High group	Average group	Low group
One	I	11	10	4
	II	2	0	1
	III	11	15	7
	IV	16	8	7
	V	9	10	4
Three	VI		24	4
	VII		4	4
	VIII		11	7
	IX	5	10	6

cannot be answered here; however, there is certainly a need for some further study suggested.

It should also be noted that in any study specifically concerned with analyzing teachers' questioning behavior, it would be possible to subscript this category to account for finer differentiations in the kinds of comprehension activities, or question types, used in the observed classes. Attempts to examine questioning in reading lessons have too often been dependent upon setting the conditions for the questioning to be measured outside the normal classroom procedures. If the reading category system were used, with the comprehension solicitation category appropriately subscripted, questioning could possibly be examined under more natural conditions. The FIER showed quite clearly that questioning on the reading selections did not account for as large a proportion of the lesson content in the reading classes observed as we might normally expect in basal reading lessons, especially among the low groups.

Category 3: Oral reading solicitations. The FIER analysis indicated very clearly that in the low groups especially, there was a tendency for pupils to be asked to read, without the purpose for the reading being clearly articulated beyond oral reading for its own sake. The data recorded in Table 9.3 show that the proportion of time taken up by the oral reading solicitations was fairly stable across all groups as compared with the other solicitation categories, and there is no indication that the reading group level was a determining factor. There is some indication that the oral reading solicitations were more characteristic of the grade one over the grade three classes, and the finding shows a slight tendency for the low group at the third grade level

Table 9.3. Proportions of the Total Behavior Recorded for Category 3 (Oral ~~/Silent/~~ Reading Solicitations) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentage of Category 3 behavior		
		High group	Average group	Low group
One	I	7	8	6
	II	4	4	3
	III	3	3	5
	IV	4	7	9
	V	12	7	10
Three	VI		0	1
	VII		0	1
	VIII		1	1
	IX	1	1	2

to be the recipients of more oral reading solicitations compared with the other grade three groups reported.

To determine more accurately the real number of oral reading solicitations, the build-up in the 3-12 cell (Oral reading--Pupil reading responses) in the original matrices could be examined. This type of cell analysis will be discussed later in the report.

Category 4: "Other" solicitations. The findings for the "Other" solicitations are summarized in Table 9.4 and the results show that this category, while used more in some classes and some groups, was not employed extensively. This finding reflects the limited use of other categories of behavior in the FIER analysis and lends support to the concentration on the three main areas -- word perception, comprehension, and oral reading in the revised category system.

In the first grade classes, the "Other" category was used more with the average group in Classes I, III and V -- with the low group in Class II, and with the high and average groups in Class IV. The transcribed record showed that this category was used to identify solicitations in which the teachers questioned pupils on their attitudes towards reading and their understanding of the independent work activities assigned. These solicitations were, therefore, related to reading, but were not specific to the development of particular reading skills, except in the most general way. This was also true in the grade three classes, except for the high group in Class IX. The interaction in the high group in Class IX was very different from any other group reported upon in the study. Much of the interaction revolved around the pupils being asked to make decisions and to offer suggestions about their independent activities. In other words, these pupils were given many

Table 9.4. Proportions of the Total Behavior Recorded for Category 4 ("Other" Solicitations) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 4 behavior		
		High group	Average group	Low group
One	I	3	4	1
	II	0	1	2
	III	2	4	4
	IV	2	2	0
	V	1	2	1
Three	VI		2	2
	VII		3	5
	VIII		1	0
	IX	12	2	2

opportunities to discuss their work and this accounted for the larger proportion of "Other" solicitations. While this category was non-specific, it did point up a major difference in the kinds of solicitations aimed at this group over the other groups in the class.

Category 5: Teacher non-soliciting reading behavior. The proportions of behavior in this category are reported in Table 9.5. In this category, the behavior tended to be teacher specific in the grade one classes, with Teacher II recording the highest percentage. This reflects upon Teacher II's tendency to read the selections aloud to pupils in all groups.

In the third grade classes, with the exception of Class VII, the patterns of the combined or average groups were characterized by more teacher lecturing behavior. At the extreme, Teacher VII recorded 36 percent of the total verbal behavior observed in this category (reflecting her tendency to meet the combined group in order to direct them in their independent activities). Teacher VII, like Teacher III at the grade one level, dictated exercises to the group, and this accounts for the larger percentage of behavior in this category in that class. The gross differences across the teachers on this behavioral dimension were indicated most by the range across groups and across grade levels which were as follows:

	High group	Average group	Low group
Grade one	7-14%	3-16%	4-18%
Grade three		5-36%	6-12%

In terms of the reading group context of the interaction, the amount of behavior recorded in this category is especially interesting for it

Table 9.5. Proportions of the Total Behavior Recorded for Category 5 (Teacher lecturing) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 5 behavior		
		High group	Average group	Low group
One	I	7	7	11
	II	14	12	18
	III	9	16	6
	IV	8	12	4
	V	8	3	7
Three	VI		13	6
	VII		36	12
	VIII		5	7
	IX	7	14	9

points up most clearly that the supposed emphasis on the increase in teacher-pupil verbal interaction in the small group meeting may not necessarily materialize. That is, it is not impossible that the teacher may tend simply to meet the one or more groups and allow for very limited interaction.

That the revised reading categories have indicated the relative proportions of non-interactive behavior characterizing certain of the group lessons explains, in part, why so few episodes were available for the FIER analysis in some classes. It also points up one of the advantages of this new system over the FIER, since the non-interactive reading behavior was barely touched upon in the FIER analysis.

Category 6: Teacher non-reading behavior. The percentages for this category are reported in Table 9.6. The results suggest, with few exceptions, that the verbal interaction in the reading groups focused mainly upon the reading context of the lesson during the times specified. This conclusion is supported by the transcript record which showed that the non-reading behavior was directed mainly at the independent groups. Teacher II spent considerable time directing the work of the out groups, and in Class VII, members of the combined group were allowed to break into the low group lesson in order to discuss their work with the teacher. These interruptions took time from the group lesson in question and by including this category it was possible to indicate just how much of the group time was taken up in this way. The non-reading centered behavior, when it did not involve the independent groups, often indicated attempts on the part of pupils to discuss other topics with the teacher near the end of the group meeting. The teachers non-reading centered responses were recorded in Category 6 according to

Table 9.6. Proportions of the Total Behavior Recorded for Category 6 (Non-reading Behavior) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 6 behavior		
		High group	Average group	Low group
One	I	3	2	1
	II	5	5	7
	III	5	2	3
	IV	3	2	4
	V	2	2	4
Three	VI		0	4
	VII		3	8
	VIII		1	0
	IX	2	3	2

the ground rules. In effect, this category accounts for a weakness in the FIER system and a failure in Flanders' system to allow for a comprehensive record of non-subject centered behavior in the classroom context. Where there were disproportionate amounts of non-reading centered behavior recorded, this could provide some interesting insights into the reading subject centeredness of the teaching environment.

Category 7: Teacher confirming reactions. The findings for Category 7 are summarized in Table 9.7. The results for this category suggest that the teachers were more similar in terms of the proportions of their confirming behaviors than they were for any of the other categories mentioned thus far. Moreover, as might have been predicted from the Flanders analysis (Categories 2 and 3), the differences across groups were minimal. While there were classes where the percentages of confirming behavior in the low group were lower than for the other groups, there were also classes where the low group recorded more confirming reactions. Unlike the FIER, the proportionate amount of confirming behavior, rather than numbers of confirming statements, are indicated in this analysis.

Category 8: Teacher extending reactions. The proportions of the teacher extending reactions are recorded in Table 9.8. The results suggest that extending reactions were not common at either grade level, but that they did occur more frequently at the third grade level with the combined and average groups. The low percentages of extending reactions may reflect the large proportion of oral reading responses indicated below, and by the Flanders and the FIER analyses, for it is unlikely that orally read responses would lend themselves to teacher extending reactions. That the percentages of extending reactions were

Table 9.7. Proportions of the Total Behavior Recorded for Category 7 (Teacher Confirming Reactions) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 7 behavior		
		High group	Average group	Low group
One	I	10	10	12
	II	6	5	3
	III	13	15	10
	IV	11	11	9
	V	11	10	9
Three	VI		12	12
	VII		8	10
	VIII		11	6
	IX	7	14	12

Table 9.8. Proportions of the Total Behavior Recorded for Category 8 (Teacher Extending Reactions) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 8 behavior		
		High group	Average group	Low group
One	I	2	1	1
	II	0	2	0
	III	1	3	2
	IV	2	3	3
	V	4	2	1
Three	VI		4	1
	VII		4	4
	VIII		3	2
	IX	1	4	1

higher for the combined and average groups at the grade three level would bear this out, for they not only gave fewer oral reading responses but were more likely to respond with their own ideas and opinions. These responses would no doubt lend themselves to a greater proportion of teacher extending reactions. This interactive pattern can be examined later when the cell areas of the matrices are discussed in greater detail.

Category 9: Teacher corrective reactions. The proportions of teacher corrective reactions are recorded in Table 9.9. In this category, the group differences in all classes were very clear. The low group interaction was characterized by a greater proportion of teacher corrective reactions, with the differences in some classes reaching considerable proportions. In view of the Flanders' and FIER analyses, these results were not surprising and point up the value of this category in the system.

The most pronounced differences were in Class I where the low group recorded 11 percent of the total behavior in this category, compared with only 2 percent in the high group. The differences were not so great but the proportions were more pronounced in Class IV. There, 20 percent of the verbal interaction of the low group involved teacher corrective reactions, while the proportions for the high and average groups were 12 and 14 percent respectively.

The findings for this category suggest an interesting observation. That is, while teachers may behave very differently in terms of the proportion of any one behavior, there often is a tendency toward a stability across reading groups. For example, while a teacher may use less or more corrective behavior, the greater proportion of corrective

Table 9.9. Proportions of the Total Behavior Recorded for Category 9 (Teacher Corrective Reactions) for the Reading Groups in the Nine Classes

Grade	Classes	Percentages of Category 9 behavior		
		High group	Average group	Low group
One	I	2	5	11
	II	9	10	10
	III	6	7	16
	IV	12	14	20
	V	5	8	10
Three	VI		5	16
	VII		3	6
	VIII		10	15
	IX	5	3	10

reactions are directed at the low group. That the low groups in these reading classes were subjected to the greater proportion of corrective feedback and criticism has been pointed up by all three analyses. The merits of the present system is that it has captured the source of the problem through a far less complex process than was true in the application of the FIER. Moreover, it has made more explicit the reading basis of this criticism in a way that was not possible with the Flanders, except through the subscripted categories. This is possible, as will be shown below, because of the possibilities for examining the relations among different behaviors in the matrices.

Category 10: Pupil content-centered responses. The proportions of pupil content-centered responses are recorded in Table 9.10. These data suggest that the average groups at the first grade level were more likely to give content responses than were the high and low groups. Other than that general difference, there were no supportable trends across the groups or classes. There may be a need under some conditions to make more explicit the behaviors captured by this category. For example, there may be some value in separating out responses on the selection content from other responses. This possibility will have to be explored as the system is used in later studies.

Category 11: Pupil self-expression responses. The proportions of self-expression responses are recorded in Table 9.11. The results indicate grade one high groups made a larger proportion of responses of this type than did the average groups, and that the low groups made the least. With the exception of Class VII, the same trend was characteristic of the third grade classes. Furthermore, the percentages for the high and combined groups and the one low group were higher at the third

Table 9.10. Proportions of the Total Behavior Recorded for Category 10 (Pupil Content Centered Responses) for the Reading Groups in the Nine Classes

Grade	Classes	Percentages of Category 10 behavior		
		High group	Average group	Low group
One	I	3	9	5
	II	2	3	1
	III	3	11	7
	IV	8	6	9
	V	6	7	2
Three	VI		14	6
	VII		4	14
	VIII		6	5
	IX	3	20	8

Table 9.11. Proportions of the Total Behavior Recorded for Category 11 (Self Expression Responses) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 11 behavior		
		High group	Average group	Low group
One	I	4	1	1
	II	0	0	0
	III	6	2	0
	IV	4	2	1
	V	4	2	1
Three	VI		8	0
	VII		13	2
	VIII		3	10
	IX	10	2	2

grade level. This suggests that readers who are perceived as more able are given more opportunities to interact in the reading class on the basis of their own ideas and opinions. That less able readers do not enjoy these same opportunities, but are held to oral reading and content responses, raises some interesting questions about the nature of the reading lesson, especially when all groups are ostensibly being taught by the same approach. Apparently, the reading category system has picked up one of the important findings of the FIER with far less effort in terms of the observational procedures.

Category 12: Pupil oral reading responses. The proportions of oral reading responses are reported in Table 9.12. In three of the grade one classes (III, IV, V) and in all the grade three classes,¹ the low groups recorded the greatest proportion of responses in the oral reading category over the other groups. These findings were offset in the other groups by the greater proportion of the high group responses in the self-expression category (11) and the greater proportion of the average group responses in the content-response category (10). This observation reflects the findings of the FIER and the subscripted "reading" category in the Flanders' analysis and supports the inclusion of this category in the reading system.

Category 13: Silent reading responses. The proportions of silent reading behavior are recorded in Table 9.13 and suggest that, despite

¹ The ground rule that pupils reading aloud from materials written by themselves should be categorized as self-expression responses was added after the initial analysis and therefore the responses of the high group in Class IX are recorded as oral reading responses in this report of the observed behavior. They should be interpreted as self-expression responses since pupils were reading stories they had written themselves.

Table 9.12. Proportions of the Total Behavior Recorded for Category 12 (Oral Reading Responses) for the Reading Groups in the Nine Classes

Grade	Classes	Percentages of Category 12 behavior		
		High group	Average group	Low group
One	I	17	19	9
	II	39	26	30
	III	11	7	20
	IV	15	15	18
	V	14	19	23
Three	VI		1	23
	VII		2	10
	VIII		22	26
	IX	21	5	16

Table 9.13. Proportions of the Total Behavior Recorded for Category 13 (Silent Reading Responses) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 13 behavior		
		High group	Average group	Low group
One	I	1	3	3
	II	0	0	1
	III	2	1	3
	IV	1	6	5
	V	7	7	1
Three	VI		1	1
	VII		0	0
	VIII		3	2
	IX	0	5	2

the class and group differences, those differences tend to be class specific. That large percentages of the group opportunity for face to face interaction were taken up by silent reading in some classes leads one to question the assumption of the group encounter as a means for increasing that face to face interaction in those classes. The time involved in silent reading activities was not captured by the FIER and shows one of the unique values of the reading category system for the analysis of the reading lesson.

Category 14: Unison group responses. The proportions of unison responses are recorded in Table 9.14 and, while there are no observable trends across the reading groups, the amount of behavior recorded in this category supports its inclusion in the system. The FIER analysis strongly suggested the need to account for this behavior in the reading class, if only to pinpoint just what proportion of pupil responses are of a unison nature.

Category 15: Pupil initiating behavior. The proportions of pupil initiating behavior are recorded in Table 9.15. Pupils in all groups in Class II initiated more verbal behavior than did any of the groups in the other classes at either grade level. It was pointed out in the FIER analysis, that in this class, pupils corrected their peers' oral reading responses sometimes more often than did the teacher. It was those corrections that are partly reflected in Category 15. This suggests that there may be value in establishing a separate category for pupil corrective behavior, so as to provide a more accurate record of this phenomenon of peer correction. Certainly, the findings of the FIER and the lack of specificity in this account of pupil initiating behaviors would support such a move. However, this step may not be required in

Table 9.14. Proportions of the Total Behavior Recorded for Category 14 (Unison Responses) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 14 behavior		
		High group	Average group	Low group
One	I	10	5	5
	II	2	3	3
	III	6	3	0
	IV	4	4	2
	V	4	7	8
Three	VI		7	5
	VII		0	0
	VIII		2	1
	IX	4	1	2

Table 9.15. Proportions of the Total Behavior Recorded for Category 15 (Pupil Initiating Behavior) for the Reading Groups in the Nine Classes

G r a d e	C l a s s	Percentages of Category 15 behavior		
		High group	Average group	Low group
One	I	4	3	3
	II	11	11	13
	III	4	3	2
	IV	5	5	2
	V	2	3	3
Three	VI		1	6
	VII		5	1
	VIII		4	2
	IX	7	2	5

a general analysis of reading behavior, for it would be possible to determine the proportions of initiating behaviors (as reactions to oral reading miscues) by examining the oral reading--pupil initiating cell (12-15) in the matrix. The build-up in this cell would offer some insights into this behavior pattern and points up the value of matrix interpretation in the analysis of the reading lesson.

Category 16: Silence and confusion. The proportions in the silence and confusion category are recorded in Table 9.16. The amount of silence and confusion varies for the different groups across the nine classes. While the proportions for the low groups were higher in six of the nine classes, the differences were not great enough to warrant discussion. What this category does pinpoint is that while the groups are ostensibly brought together to ensure greater opportunities for face-to-face interaction, in some classes, a considerable proportion of the class time is taken up by non-verbal interactive activities or confusion. The meaning of this finding would have to rest upon the teachers' response to what she perceives as being accomplished in the group situation in the time allowed. This category, as have several others, compensates for one of the major deficiencies in the FIER analysis: the failure of the FIER to make explicit behavior not recorded in the context of the episode specifications.

Thus far, the discussion has centered upon the proportions of behavior recorded in the individual reading categories. Even at this stage, the results suggest some support for the value of the system in identifying aspects of the content of the verbal behavior of teachers and pupils in reading captured by the more complex processes of the FIER analysis. Unlike the FIER, this system has made it possible to

Table 9.16. Proportions of the Total Behavior Recorded for Category 16 (Silence and Confusion) for the Reading Groups in the Nine Classes

C r a d e	C l a s s	Percentages of Category 16 behavior		
		High group	Average group	Low group
One	I	11	9	11
	II	4	15	8
	III	9	8	13
	IV	6	2	5
	V	5	5	7
Three	VI		7	10
	VII		10	13
	VIII		8	7
	IX	4	3	6

indicate more specifically the proportions of the reading group lessons involving the behaviors identified, including the integration of the non-interactive reading behavior, the non-reading behavior, and the length of the silences and/or periods of confusion which were not specifically dealt with in the FIER analysis.

Interpretation of the General Areas of the Matrix

In the discussion of the system in Chapter 8 (p. 335), several areas of the matrix which would offer different insights into the observed behavior allowed for in the interpretation of the sixteen categories were suggested. As with the Flanders' analysis, it is possible to single out the relative amounts of teacher-talk (Categories 1-9), pupil-talk (Categories 10-12, 14, 15), and the amount of silence and confusion (Categories 13, 16) in the observed lessons. Other composite areas which can be examined and compared include the proportions of teacher solicitation behavior; the proportions of teacher reaction behavior; the proportions of pupil non-reading and reading responses; and/or any other areas which may be identified as important by the investigator. Those which have been noted above will be examined in terms of the findings from the analysis of the verbal behavior in this pilot investigation.

Proportions of teacher-talk, pupil-talk, and silence and confusion.

The percentages of teacher-talk were calculated for each group in each class by summing the number of tallies in Categories 1 to 9 and dividing by the total tallies in the matrix. For pupil-talk, the respective categories were 10-12, 14 and 15 and for Silence and confusion, the categories were 13 and 16. The findings for these matrix areas are

reported in Table 9.17 for the different reading groups in the classes. The results suggest that in all classes, with the exception of Class II, the reading teachers controlled more of the verbal interaction than all pupils combined. While there are no steady trends in terms of group patterns at the grade one level, at the grade three level the teachers talked more in the combined and average groups compared with the low groups. Also, the grade three teachers talked more in the combined and average group context than did grade one teachers with any of their reading groups. This finding was also reported in the Flanders analysis.

That the teachers talked more than all pupils combined surely reflects upon the validity of the assumption that the small group encounter would allow for more pupil interaction. While this may be true when the grouping is compared with whole class organization, a position which requires study, we find that reading teachers still tend to do most of the talking in the small group context.

That pupils control as much of the reading class verbal behavior as they do undoubtedly reflects the amount of oral reading that goes on. This observation is borne out in Class II especially, for there, while the pupils controlled more of the verbal interaction, that control rested mainly upon the fact that they read aloud longer selections in all lessons and in all groups. This point is reflected, too, in the grade three data where there is a trend toward the teacher talking more in the higher groups. It will be recalled that pupils in the higher groups at the grade three level did not read aloud to the same extent as the low groups. In either case, it may be concluded that pupils have limited opportunities to talk in their own language patterns

Table 9.17. Comparison of the Proportions of Teacher-Talk and Pupil-Talk for the Reading Groups in the Nine First and Third Grade Classes.

Grade	Classes	Percentages by reading group					
		High group		Average group		Low group	
		TT	PT	TT	PT	TT	PT
One	I	51	38	50	37	61	23
	II	42	54	42	43	45	47
	III	57	30	66	26	55	29
	IV	58	36	60	32	58	32
	V	57	30	52	38	56	37
Three	VI			60	31	48	40
	VII			65	24	59	27
	VIII			50	37	44	44
	IX	50	46	62	30	57	33

in the reading class even when a group-type organizational plan is used. The meaning of this finding must rest ultimately in our decisions about the ideal role of the reading teacher in the verbal interaction of the reading class, and further study is certainly indicated here.

While the amount of Silence and confusion did vary from group to group, the ranges are not great within classes, except for Class II (high group: 4 percent; average group: 15 percent). That the proportions reported were relatively low reflect the verbal behavior sample to some degree. That is, had a record of each total lesson been obtained, instead of the selected segments, the proportions recorded may have been closer to the percentages recorded in the Flanders' analysis in Chapter 5 (p. 131).

Proportions of teacher solicitation behavior and teacher reaction behavior. The proportions of teacher solicitation behaviors were calculated by summing the tallies in Categories 1, 2, 3 and 4 and dividing these by the total number of tallies in the matrix. The respective categories for teacher reactions were 7, 8 and 9. The percentages of teacher solicitation behaviors and teacher reaction behaviors for the groups in the nine classes are compared in Table 9.18. The results suggest that the differences in the proportions of behavior in these general areas appear to have been teacher specific and were not related to the different reading groups. While the differences in these classes support no trends in terms of the reading groups, it is not impossible that these areas may differentiate the behaviors of teachers using different reading methods or working under different organizational patterns. At least, the new system has been able to capture the pro-

Table 9.18. A Comparison of the Proportions of Teacher Solicitation Behavior (Categories 1, 2, 3, 4) and Teacher Reaction Behavior (Categories 7, 8, 9) for Each Reading Group in the Nine Classes

Grade	Class	Percentages of teacher reacting behaviors by group					
		High Solicitation Reaction		Average Solicitation Reaction		Low Solicitation Reaction	
One	I	14	27	16	25	24	25
	II	15	8	17	8	13	7
	III	20	23	25	23	28	18
	IV	25	22	28	18	32	18
	V	20	27	20	27	20	25
Three	VI			21	26	29	9
	VII			15	11	20	19
	VIII			24	20	23	15
	IX	13	18	21	24	23	23

portions of time taken up with teacher solicitations and this was not possible with the FIER.

Proportions of pupil oral reading responses and non-reading verbal responses. The proportions of oral reading responses (Category 12) and the non-reading verbal responses (Categories 10, 11) for the different reading groups are compared in Table 9.19. The results clearly indicate that at the first grade level, pupils in all reading groups, with the exception of the average group in Class III, made a greater proportion of oral reading responses than non-reading responses. There is also an observable trend indicating that the low groups made an even greater proportion of oral reading responses than did the other groups.

In the third grade classes, the more able groups differed from the low groups in that, with the exception of the average group in Class VIII, their responses were more likely to be in their own words. The low groups in all classes were bound to oral reading responses, pointing up a major difference in the verbal interaction patterns among groups at that grade level and lending some support to the earlier conclusions about the reasons for the variability in the amounts of teacher and pupil talk in the different reading groups.

These grouped categories represent areas of the matrix that can be interpreted and compared according to the specifications of the study. In the section which follows, attention is directed to the cell areas within the matrix and how these may extend the interpretation and the analysis.

Interpretation of the Cell Areas of the Matrix

In the discussion thus far, several references have indicated

Table 9.19. Percentages of Pupil Oral Reading Responses and Non-reading Responses for the Different Groups in Each of the Nine Classes

Grade	Class	Percentages by reading group					
		High		Average		Low	
		Read	Non-read	Read	Non-read	Read	Non-read
One	I	17	7	19	10	9	6
	II	39	2	26	3	30	1
	III	11	9	7	13	20	7
	IV	15	12	15	8	18	11
	V	14	10	19	9	23	3
Three	VI			1	22	23	6
	VII			2	17	10	16
	VIII			22	9	26	15
	IX	22	14	5	22	16	10

that the matrix may be examined in terms of the frequency of behavior in any cell area in order to better understand the dynamics of the verbal interaction in the reading class using the reading categories. In this section, two matrices, a composite matrix for the high groups (Table 9.20), and a composite matrix for the low groups (Table 9.21) in the grade one classes, will serve to highlight the kinds of interpretation that could be carried out when comparing the cell areas in two or more matrices. The interpretation will again concentrate to some extent on the meaning of the findings as they relate to the ability levels of the two reading groups. Since the total number of tallies in each matrix are very similar (high group: 3643 and low group: 3775) the raw scores will serve the purposes of this discussion. If the number of tallies were radically different, then only percentage scores would be very meaningful.

Patterns of pupil responses to the different types of teacher solicitations. One question which could be explored in the cell areas is what kinds of responses do pupils in the high and low reading groups make to the teacher solicitations? (This, it will be remembered, was a question explored in the FIER analysis too). To answer this question, the area of the matrix bound by rows 1, 2, 3, and 4 (teacher solicitations) and columns 10, 11, 12, 13, 14, and 16 (pupil responses) should be examined. Figure 9.1 illustrates this area of the matrix with the high and low group tallies recorded for the comparison.

Table 9.20. Composite Reading Interaction Matrix for the High Reading Groups at the First Grade Level

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(Word Percept.)	1	27	1	1			1			2	23	9	16		50	2	12
(Comprehension)	2		85		4	4	4	1			79	63	8	4	75	6	34
(Reading)	3		2	50	3	2	3						113	9	11	4	12
("Other")	4		4	4	11	4			1		1		5	4	10	3	17
(Reading Lec.)	5	11	17	20	7	227	11			2			2	7		12	13
(Non-read.)	6	3	6	6	3	9	67		1	2	2		16		2	6	11
(Confirm React.)	7	35	104	51	17	39	9	35	20	11	1		6		10	29	9
(Ext. React.)	8		1	1	1			2	4	1	15	24	2		4		6
(Corr. React.)	9	9	32	9	5	3	5	2	5	69	11	5	62	1	7	16	7
(Cont. Resp.)	10	1	12	3	1	2		81	13	18	26					2	8
(Self-Exp. Resp.)	11	1	13		1	1	1	63	4	8		28			1	1	1
(Oral Read. Resp.)	12	10	16	20	3	8	18	79	6	78		1	364	1	2	74	17
(Sil. Read. Resp.)	13	1	3	7	2	4	2	1						55		2	2
(Unison Resp.)	14	28	29	16	3	6	2	63	2	13	1		2		14	3	5
(Pupil Init.)	15	6	11	10		7	6	37	7	12			77		1	12	5
(Silence, Confus.)	16	13	27	18	2	18	4	15	7	26	3		23		2	16	94
TOTAL		145	362	216	63	334	133	379	70	242	162	130	696	81	189	188	253
%																	

Total Tallies 3643

- Teacher-talk (Categories 1-9): _____ percent
- Pupil-talk (Categories 10-12, 14, 15): _____ percent
- Silence & Confusion (Categories 13, 16): _____ percent
- Teacher solicitations (Categories 1, 2, 3, 4): _____ percent
- Teacher reactions (Categories 7, 8, 9): _____ percent
- Pupil non-reading responses (Categories 10, 11): _____ percent
- Pupil reading responses (Category 12): _____ percent

Table 9.21. Composite Reading Interaction Matrix for the Low Reading Groups at the First Grade Level

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(Word Percept.)	1	33		3			2	1		4	43	7	56		43	2	32
(Comprehension)	2	1	54	1		1	1			1	62	10	4	6	16	3	15
(Reading)	3	1	1	49		4	8			3			107	9	11	4	30
("Other")	4	1	2	6	11	3	1	1		3	5	4	4	2	2	3	21
(Reading Lec.)	5	11	16	22	11	240	10	2	2	3			2	2		10	16
(Non-read.)	6	7	4	20	5	9	61	4		1	1		23	5	2	6	5
(Confirm React.)	7	71	44	60	9	43	3	36	7	13	2		19	1	4	13	5
(Ext. React.)	8	1	1			1	1		8	1	23	3	4		2		2
(Corr. React.)	9	18	11	18	9	8	1	1	6	140	23	1	202	3	17	26	17
(Cont. Resp.)	10	4	7	3	1	2	4	88	12	39	14		1				
(Self-Exp. Resp.)	11	5	3		1	1		11	1	4		3					1
(Oral Read. Resp.)	12	24	6	20	10	4	22	118	4	202			214		3	90	45
(Sil. Read. Resp.)	13	1	5	2	1	3	8	1		4				63		1	1
(Unison Resp.)	14	21	5	8	1	7	3	34	4	15	1		5	3	28	3	3
(Pupil Init.)	15	2	1	7	3	8	10	24	1	16			84		6	8	8
(Silence, Confus.)	16	26	17	19	8	16	6	13	4	53	1		41		3	7	132
TOTAL		227	177	238	70	350	141	334	26	502	175	29	766	94	137	176	333
%																	

Total Tallies 3775

Teacher-talk (Categories 1-9): _____ percent

Pupil-talk (Categories 10-12, 14, 15): _____ percent

Silence & Confusion (Categories 13, 16): _____ percent

Teacher solicitations (Categories 1, 2, 3, 4): _____ percent

Teacher reactions (Categories 7, 8, 9): _____ percent

Pupil non-reading responses (Categories 10, 11): _____ percent

Pupil reading responses (Category 12): _____ percent

		10	11	12	13	14	16
1	H	23	9	16	-	50	12
	L	43	7	56	-	43	32
2	H	79	63	8	4	75	34
	L	62	10	4	6	16	15
3	H	-	-	113	9	11	12
	L	-	-	107	9	11	30
4	H	1	-	5	4	10	17
	L	5	4	4	2	2	21

H = High reading group

L = Low reading group

Fig. 9.1. High and low group pupil responses to the different teacher solicitations

These data suggest that the low group was asked to respond to a greater proportion of word perception solicitations than was the high group and that a greater number of the low group responses involved pupils reading orally (Category 12) in response to those word perception solicitations. From the build-up in the 1-16 cell for the low group, it is obvious, too, that these pupils were unable to respond as easily or were required to make more non-verbal responses than the high group to the word perception solicitations, for silence followed the teacher solicitations more often. The record suggests that the high group was allowed to make more unison responses to the word perception solicitations (Cell 1-14), suggesting that their lessons may have been a review of the skills being studied.

That high group pupils were given more freedom in their responses

than the low group is indicated by the build-up of tallies in Cell 2-11 which indicates the number of self-expression responses to comprehension solicitations. What we find is that low group pupils were not only bound by the controls of oral reading responses to the word perception solicitations, but that they were also bound to content-centered responses rather than self-expression responses in relation to the comprehension solicitations when compared with the high reading groups. But what is also interesting is that the high group also had more difficulty responding immediately to the comprehension solicitations, as indicated by the build-up in the 2-16 cell where the comprehension solicitations are followed by silence. One could question whether teacher expectations for the high group were as realistic as they might be in terms of the types of questions they were expected to answer. The FIER did indicate that the high groups were asked more complex questions.

While the high and low groups were very similar in the amount of oral reading recorded in response to the oral reading solicitations (Cell 3-12), the build-up in the 3-16 cell suggests that the low group had more difficulty in making an immediate response. This suggests the need for a "no response" category to single out "no response" from some of the non-verbal activities which might be precipitated by the solicitation. A future investigator would be in the best position to determine the special needs in this area.

Apparently, those solicitations categorized as "Other" (Category 4) by the observer also caused some confusion for the pupils, at least as indicated by the number of tallies in Cell 4-16 which shows silence following the "Other" solicitations. This interaction pattern was not

picked up in the general analysis of the transcribed behavior and points up an unexpected value in using the reading system.

Patterns of teacher reactions to pupil responses. What kinds of reactions did the teachers make to the pupils' responses? This question was explored in the FIER and can be examined here by analyzing the build-up in the matrix area bounded by rows 10-12, 14 and 16 (pupil responses) and columns 7, 8, and 9 (teacher reactions) as illustrated in Figure 9.2.

		Columns			
		7	8	9	
Rows	10	H	81	13	18
		L	88	12	39
	11	H	63	4	8
		L	11	1	4
	12	H	79	6	78
		L	118	4	202
	13	H	1	-	-
		L	1	-	4
	14	H	63	2	13
		L	34	4	15
	16	H	15	7	26
		L	13	4	53

H = High group

L = Low group

Fig. 9.2. Teacher confirming (7), extending (8), and corrective (9) reactions to pupils' different types of responses for the high and low reading groups in grade one

In examining these data it is apparent that the content-centered responses of the high group were confirmed more often than those of the low group (Cell 10-7). The high group self-expression responses also resulted in a larger proportion of teacher confirming reaction (Cell 11-7) and very little teacher corrective reaction (Cell 11-9). The low groups spent less time responding in the self-expression category, but even there, we find a proportionately greater amount of teacher corrective reaction recorded.

The differences between the two groups are readily observed in the teachers' reactions to pupils' oral reading responses (Row 12--Columns 7, 8, and 9).

While all the responses of low group pupils received a larger proportion of corrective teacher reactions, the low group oral reading responses resulted in far more teacher corrective reaction when compared to the high group (202 and 78 tallies respectively).

These data are beginning to reveal the background to the different levels of corrective behavior recorded in the section dealing with the individual categories by showing that while low groups were criticized more for their content responses, they were open to even more corrective feedback and criticism as the teacher reacted to their oral reading responses. In terms of the oral reading, what we see operating is the "vicious cycle" revealed in the FIER analysis. That is, low group pupils are required to respond more often with oral reading responses, and these result in an even greater proportion of teacher corrective reactions. The problem for the low group, therefore, rests primarily in what they are asked to do.

Patterns of teacher behavior in relation to pupil initiated be-

havior. What type of behavior follows upon pupils' unsolicited verbal statements or their attempts to initiate the interaction? These patterns of interaction can be identified in the matrix by examining the area bounded by row 15 and all the columns as illustrated in Figure 9.3.

		Columns															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Row 15	H	6	11	10	-	7	6	37	7	12	-	-	77	-	1	12	5
	L	2	1	7	3	8	10	24	1	16	-	-	84	-	6	8	8

H = High group
L = Low group

Fig. 9.3. Comparison of the behavioral responses following pupil initiated behavior for the high and the low groups

The frequencies in the teacher solicitation categories (1, 2, 3, 4) suggest that in both groups the pupils' unsolicited verbal behaviors were ignored to some extent, since the teacher apparently continued with the lesson by posing the next solicitation. However, many were reacted to by the teacher as indicated by the number of confirming, extending, and corrective reactions of teachers in Categories 7, 8, 9. Furthermore, these pupil-initiated statements were confirmed or accepted by the teacher (Cell 15-7) more often than they were criticized or corrected (Cell 15-9); especially in the high groups. The build-up in Cell 15-12 indicates to some extent the number of times pupils corrected their peers' oral reading responses.

SUMMARY AND CONCLUSIONS

This chapter has reported the design procedures and the various types of interpretations possible in analyzing the teaching of reading in primary reading groups with the Observational System for the Analysis of Primary Reading Lessons. An attempt has been made to show that, while the system parallels the Flanders analysis, upon which it was modelled, the reading category system has captured many of the same facets of the verbal interaction specific to the teaching of reading revealed in the FIER analysis. While it must be admitted that the observation system has not identified the specific behaviors of the FIER, it has the advantage of being less complicated, and is more likely to prove useful as an observational technique for analyzing the teaching of reading under normal classroom conditions. Because of its comparative simplicity, the observation system may, in the long run, generate more information than the FIER, if only because it is more likely to be used. Added to this, the suggestion has been made that certain of the general reading categories could be subscripted to provide greater specificity, without distorting the system. The system could, therefore, maintain its best feature--its capacity to capture teacher-pupil verbal behavior within the context of the natural conditions for the teaching of reading, the classroom.

The reader will have noticed a general failure in this report to comment upon the meaning of the observed behavior, although several brief attempts to account for the meaning of the observed behavior have not been resisted at certain points. However, evaluative-type comments have been avoided and the analysis has been held to a descriptive level

on the grounds that decisions about the value of any behavior pattern must rest ultimately with decisions made about what constitutes "good teaching of reading." Since there may be many definitions of that "goodness", depending upon the orientation of the evaluator, decisions about the worth or value of the observed patterns of interaction will depend upon that orientation. Many theories of the "good teaching" of reading have been approved in the different approaches to the teaching of reading, and while they may hold a common position on certain issues, the situation is not clear.

Given the different positions on the teaching of reading, one issue must be "what is going on in the reading class?" The observational scheme could be used by the proponents of any method to determine how the procedures of the approach are being implemented in the classroom. In turn, the information generated could be used to suggest modifications or changes in the approach, or to indicate steps necessary to ensure that the methodology of the drawing board makes its transfer to the reading class without too much distortion. That teachers or student teachers may use the system to examine their own behavior is another possibility. It would be interesting to speculate upon the kinds of ideas that might be generated in a group of teachers, or student teachers, if each were presented with the data pertaining to their own behavior in the reading class. The profiles for each teacher in this study, which are included in Appendix P, would undoubtedly lead some teachers to question many of their own procedures and to examine their patterns of behavior more critically. Other ideas about the future use of the system will be referred to in the final chapter when the implications for future research are discussed in greater detail.

CHAPTER 10

SUMMARY, FINDINGS, CONCLUSIONS, AND IMPLICATIONS OF THE STUDY

The major purpose of this study was to explore teacher-pupil verbal interaction behavior under the natural conditions of the reading lesson in the self-contained classroom. Specifically, an attempt was made to describe both the affective and cognitive dimensions of teacher-pupil verbal behavior in first and third grade classrooms where teachers indicated that they taught reading by the basal reading approach, and that they grouped pupils for reading on the basis of their perceptions of the pupils' reading abilities and/or achievements. By specifying these conditions, the investigation aimed for a comparative analysis of the verbal behavior of teachers who were ostensibly teaching by the same approach, and a comparative analysis of teacher-pupil verbal behavior in primary reading groups at the first and third grade levels.

To accomplish the purposes of this study, teacher-pupil verbal behavior during four sequential morning reading lessons were audio-taped while anecdotal records of classroom events were compiled. The audio-tapes and verbatim typewritten transcripts prepared from the tapes, plus the anecdotal records, served as the basic data for the subsequent analyses which were carried out in the laboratory.

Flanders' Interaction Analysis was used as the descriptive technique for describing and analyzing the affective or social-emotional dimension of the observed verbal behavior. The Focused Interaction Episode in Reading (FIER), a content analysis system designed for the study, was used to describe and analyze the cognitive or reading con-

tent of the observed verbal behavior. By using both systems to analyze the behavior in each independent reading group, it was possible to compare the verbal behavior across the reading groups in each of the five grade one and four grade three classes which comprised the final sample.

While Flanders' system had been used in a number of studies of the teaching of reading, a review of the literature revealed no observational system specific to the analysis of the reading-centered content of teacher-pupil verbal behavior, at least not with the degree of specificity considered imperative in this study. Thus, the development of an appropriate observational scheme was not only necessary for the present analysis, but was also a primary objective of the study. The FIER, while useful in the present investigation, was acknowledged very early to be too complex and too limited in its application to be of great value in future studies, and so, therefore, the search for a more viable system continued throughout the study. As the Flanders and the FIER analyses progressed the idea for a third observational system emerged. The Observational System for the Analysis of Primary Reading Lessons represented a synthesis of the Flanders' observational model and a set of reading categories based upon the findings of the FIER analysis. In order to test the value of the system and to indicate the ways it might be used in different analyses, a pilot investigation was carried out and reported.

As the foregoing discussion would suggest, this investigation was concerned with two major issues. First there was the descriptive and comparative analysis of the total sample of reading-centered verbal behavior observed in the reading lessons with the different primary reading groups. Second, there was the problem of developing a suitable

instrument for the analysis of the teaching of reading. In the sections that follow, both the findings of the different analyses and the methodological problems are considered.

SUMMARY OF THE FINDINGS

Data were collected and analyzed in accordance with a number of research questions basic to the major problems investigated. Since the questions were specific to the analytical techniques employed, to facilitate this summary, the major findings are presented separately for the Flanders and the FIER analyses. The Flanders' findings are organized in accordance with the specific research questions outlined in Chapter 1. Because of the amount of information generated by the FIER analysis, those findings are logically ordered, rather than set out in relation to the general questions, thus providing a framework for the conclusions which are recorded in a subsequent section.

Flanders' Interaction Analysis

Research Question 1. Would the patterns of verbal interaction observed in the reading groups over four periods of observation be significantly different, when the high, average and low groups were compared?

The statistical analysis comparing the matrices of the high and average, the high and low, and the average and low reading groups in each of the observed classes revealed that with the exception of the comparison of the average and low group in one class, the patterns of interaction recorded in the matrices of the reading groups were significantly different.

Research Question 2. Would the high, average and low reading groups differ in terms of the proportions of behavior recorded in each of the ten Flanders' categories?

The statistical analysis of the behavior recorded in the Flanders' categories for the high, average, and low reading groups in each class revealed that certain behaviors occurred more or less frequently in some classes than in others, but that the proportions of behavior in certain categories were more specific to the grade or group level of the pupils.

The trend was for low groups to record a larger proportion of behavior in Category 6 (Teacher directions). Analysis of the data generated by subscribing this category, to account for directions specifying an oral reading response, revealed that many teacher directives were statements requiring pupils to read aloud.

The most significant differences were reported when the groups in each class were compared in terms of the proportion of behavior in Category 7 (Teacher criticism). There was evidence that low reading groups recorded a greater proportion of behavior in this category, and a significantly greater proportion than the average reading group in all but two classes. There was also a tendency for average groups to record more teacher criticism than high reading groups. At the third grade level, the differences among the groups were highly significant, especially when the high and low reading groups were compared. The information generated from subscribing Category 7, to determine the proportions of teacher corrective feedback to oral reading miscues, showed that low reading groups were characterized by more teacher corrective feedback than the other reading groups.

While there were no specific trends in the proportions of behavior

recorded in Category 8 (Pupil responses), the subscripting of Category 8 to indicate the amount of oral reading behavior in the lesson revealed more oral reading behavior in first grade classes, and more oral reading in low reading groups, especially at the third grade level.

While low reading groups recorded more teacher criticism they did not record significantly less teacher praise (Category 2), when compared with the other groups.

High and average third grade groups recorded more teacher lecturing behavior (Category 5) than the low groups and the first grade groups.

Research Question 3. Are there differences when the high, average, and low reading groups in each class are compared in terms of the proportions of behavior recorded in the following areas of the matrix:

- (a) the proportions of indirect and direct teacher behavior (I/D ratios)
- (b) the proportions of teachers' controlling and motivation behaviors (Revised I/D ratios)
- (c) the proportions of teacher-talk and pupil-talk?

The individual teachers recorded different proportions of indirect and direct behavior. However, in most classes, low reading groups were characterized by more direct behavior patterns. The behavior patterns became increasingly indirect in those reading groups perceived as more able. The differences were most pronounced when the third grade high groups were compared with all other reading groups.

When the subject centered categories were deleted (questioning and lecturing) and the Revised I/D ratios were calculated, the trend was for the pattern of interaction in the low reading groups to remain stable, while the higher third grade reading groups became increasingly more indirect. In other words, teachers tended to rely less upon direct control behaviors in their interaction with the reading groups identi-

fied as more able, compared with those identified as less able.

In all groups, the teachers recorded a higher proportion of talk than all pupils combined. In grade one classes, teachers talked more in the low groups compared with the higher groups, whereas in the third grade classes, teacher-talk increased in the high or combined high-average groups.

Research Question 4. Do the patterns of interaction of the high, average, and low reading groups in each class remain stable from one day's lesson to the next, or do they change?

The stability of the pattern of verbal interaction in the reading groups from day to day was essentially class specific. In some classes, the daily group lessons were more indirect or direct, yet, comparison of the groups still indicated that the number of lessons characterized by direct influence patterns was greater for the low groups. The Revised I/D ratios for the high reading groups indicated that their patterns of interaction reached very high levels of indirectness some days, and that they were less likely to record direct behavior patterns.

The FIER Analysis

Very detailed findings from the FIER analysis were presented in Chapter 7 and in several sections included in Appendix N. To summarize each of the findings in this section would be impossible, and, therefore, no such summary is attempted. Instead, only those findings considered relevant by the investigator are reported. It is anticipated that the reader, having a unique perspective, may choose to focus on other findings in generating ideas and new directions for research into the analysis of the teaching of reading.

(1) The episode, as defined for the purposes of the study, did

capture a large proportion of the verbal behavior of the teachers and pupils observed in the reading lessons. That is, teachers did solicit reading-centered responses from pupils to which they may or may not have reacted. Moreover, this cycle occurred many times over in the lesson. There were, however, certain differences that tended to be group specific, especially at the third grade level. Third grade teachers tended to lecture more to their more able reading groups in order to set the conditions under which they would complete certain assigned activities independently. While the teachers did exchange comments with the more able readers, they tended to do so on an individual basis, rather than in the context of the group reading lesson. Observations such as this, led to the development of the Observational System for the Analysis of Primary Reading Lessons, for that system was designed to account for all the verbal behavior observed in the reading lesson, and not just the verbal behavior that might take place according to the episode specifications.

(2) Teachers' reading-centered solicitations not only revealed much about the content of the lesson activity, but also showed up as major determiners of the subsequent patterns of interaction that were observed. Beyond specifying the content of the pupil responses, the solicitations largely controlled the language of the respondents. That is, in the reading lesson, the teacher would usually specify whether the pupil was to read aloud his response or whether he was to answer in his own words.

(3) While a number of broad solicitation types and specific solicitation types were identified, two general characteristics of solicitations had the greatest influence on the interaction patterns

in the different reading groups. In terms of the content of the solicitation, the key component was whether the solicitation centered upon the word perception or the comprehension skills of readers. Equally important was whether the solicitation specified an oral reading response or a response in the pupil's own words. There were indications that word perception solicitations, compared with comprehension solicitations, were more likely to call for an oral reading response. Also, where the ostensible concern of the solicitation was the comprehension aspect of reading, it seemed in many instances that the real intention may still have been the word perception dimension, especially in the lower reading groups at both grade levels. That is, responses to questions requiring read answers seemed to be reacted to on the basis of correctness of the oral reading, rather than the relation between that which was read and the original comprehension intention of the solicitation.

(4) Analyses of the solicitations revealed differences specific to the group and grade levels. When low groups were compared with the other groups in the same class, solicitations directed at the less able readers were more concerned with the word perception skills (word knowledge and oral reading). This was also true when first grade readers were compared with high and average (combined) third grade readers. Within each grade, the solicitations of the more able groups tended to concentrate more upon the comprehension aspects of reading.

When the specific solicitation behaviors were considered, group level differences were recorded. Low reading groups were asked less complex word perception type solicitations compared with the more able reading groups. When the comprehension solicitations were examined, higher reading groups recorded larger proportions of questions at the

interpretative level, compared with low reading groups who were restricted more to literal questions.

While solicitations differed according to the reading groups, the modifications may not have been adequate or even realistic where high groups and low groups were concerned. There was evidence that the solicitations aimed at both reading groups may have been above their instructional level. Certainly, low groups made more miscues per oral reading response than did more able reading groups, suggesting that the materials they were asked to use in their responses were too difficult. While high groups recorded less teacher corrective reaction than low reading groups, they seemed to have considerable difficulty making immediate responses to the word analysis solicitations and the interpretative questions directed at them, especially when compared with the average group.

(5) More class time was taken up with oral reading responses in low groups, partly because they had more difficulty reading without miscues requiring teacher corrective reactions.

(6) In making oral reading responses, while all readers made some miscues, there was limited evidence to suggest that the specific miscue reflected the ability level of the reader. Yet, when teacher reactions to miscues were analyzed, the behaviors were not only similar across teachers, but seemed unrelated to the nature of the miscue. That is, when a pupil hesitated, teachers tended to correct by suggesting the next word in sequence. While this behavior occurred when overt miscues were made, teachers were also more likely to react to overt miscues in other ways. If the teacher did not react by giving the next word in sequence, the usual behavior was to provide a global clue to

indicate to the pupil that he should self-correct. These two reactions were so successful that the limited behavioral sample prevented careful exploration of the other behaviors that were observed.

(7) While teachers corrected readers' oral reading miscues, so did other pupils in the reading group. Having been encouraged to follow along, pupils seemed to have difficulty preventing themselves from verbalizing the next word in sequence, especially when a reader hesitated. Pupils also called out words when readers made overt miscues. These words were picked up by the reader as he continued with his reading. Teachers sometimes interceded, but the data suggested that these pupil corrective behaviors were such a natural part of the oral reading lesson that they tended to go unnoticed. While the data were limited, there was evidence that pupils in all groups "helped" each other, but that low achievers were less likely to correct overt miscues than were the better readers. It appeared that low groups were less confident that their translation was the correct one and they, therefore, depended upon the teacher to do the correcting.

(8) The general content of the confirming reactions of all the teachers was similar. Grade one teachers tended to indicate the acceptability of a pupil's response (even one read aloud) by repeating the response. Grade three teachers also repeated pupils' responses, but were more likely to use minimum confirming or praise statements. When grade one teachers did not repeat their pupils' responses, they also tended to use minimum confirmation and praise statements.

(9) The open responses of pupils to comprehension solicitations were most often correct or congruent. Where the responses were not acceptable, teachers tended to react with global statements having the

intention of focusing the pupil's attention on his error in order that he could self-correct. All teachers relied heavily upon repetition of the solicitation, simple denial or a request that the pupil repeat his response, in indicating to pupils that they should self-correct. Unqualified criticism of a pupil was seldom recorded as a reaction to a pupil's attempts to respond.

(10) Teachers' reactions, while ostensibly concentrating upon pupils' self-corrections, seemed more concerned with getting an acceptable response to the solicitation than with the problems of the respondent. When, after several prompts, a pupil was unable to make an acceptable response to the solicitation, another pupil was usually called upon to make the correct response. Once a correct response was obtained, another solicitation would be directed at the group and the episode cycle would begin again.

(11) While there was evidence that individual teachers stressed certain reading-centered pupil responses over others, there was evidence that the content of the solicitation was to some extent specific to the level of the group, and that this was true across classes. That is, while teachers might emphasize word perception tasks, in general, they would emphasize these skills more with the low reading group over the more able reading groups. Similarly, even where the teacher emphasized comprehension skills, these were stressed less with the low groups compared with the more able groups.

(12) The reading content of the verbal behavior of teachers and pupils in low third grade reading groups was more like the behavior observed in the grade one classes than in the high or combined reading groups at the third grade level. This behavior seemed to explain the

differences recorded in the Flanders' analysis.

(13) When high and average groups at the third grade level were combined as one group, there was a tendency for many of the observed behaviors to parallel those of the high reading groups, rather than those of the average groups.

(14) There were differences in the activities of reading groups when exercise type materials were the focus of the reading lesson. More able readers were given generalized directions whereas less able readers were given more specific directions. There was a tendency for the work-type materials to be read in advance by the low reading groups, before they proceeded with their independent tasks.

(15) Less able readers were assured of more personal interaction with the teacher. Grade one teachers tended to meet all groups at some point during each of the daily reading lessons. Grade three teachers tended to meet their low reading groups much more regularly than their high, average, and combined groups.

(16) While a certain range of basic activities are usually specified in the basal reading manuals, the analysis of the content of the lessons, and especially the analysis of the content of the solicitations suggested that teachers differed in terms of the kinds of activities they emphasized, and that in some classes only certain activities prevailed. While the teachers might vary considerably, there were many similarities in the programs specific to the levels of the reading groups.

(17) The comments of teachers and the analysis of the solicitations offered strong evidence that the word analysis programs in these basal reading classes depended mainly upon the teachers' intuitive judg-

ments about the needs of pupils in this area at the time of the lesson. There were no indications from the teachers and no indications in the lessons that a structured word analysis program was being followed in any of the classes observed.

The Observational System for the Analysis of Primary Reading Lessons

The reading category system, generated from the major FIER findings and used in the context of the Flanders' observational model, proved to be a useful tool for generating information similar to the findings reported in the previous section. What was most important was that the system was far less complex than the FIER, both in terms of how it might be used and in the interpretative procedures followed.

CONCLUSIONS OF THE STUDY

The conclusions of the study will be presented in terms of the findings from the two major analyses.

Flanders' Interaction Analysis

On the basis of the Flanders' analysis of the affective dimensions of the patterns of teacher-pupil verbal interaction in high, average, and low reading groups in primary classes, the findings of the investigation support the following conclusions.

(1) That, when pupils are assigned to high, average, and low reading groups on the basis of teachers' perceptions of their achievements and/or abilities in reading, the patterns of verbal interaction characterizing those reading groups in the same classroom are signifi-

cantly different.

(2) That, the differences in the affective dimensions of the observed patterns of verbal interaction in primary reading groups can be traced to the differences in the influence patterns of the teachers as they interact with their reading groups. The higher the reading group in the class, the more indirect the influence pattern of the teacher. The lower the reading group, the more direct the influence pattern of the teacher.

(3) That, where the patterns of influence are more direct than indirect, there are higher proportions of teacher criticism recorded. When lecturing behavior is discounted, the influence patterns of the high reading groups are even more indirect, thus indicating the lesser proportion of teacher criticism recorded for those groups.

(4) That, criticism by the reading teacher is not generalized, but is specific to the correction of pupils' reading-centered responses. Teacher corrective behaviors in relation to pupils' oral reading mis-cues account for a large proportion of the criticism observed.

(5) That, while the influence patterns of specific teachers differ, the trends in the indirect-direct patterns of influence characterizing the reading groups in each class remain stable.

(6) That, while there are differences in the influence patterns of the first and third grade classes, the trends in the indirect-direct patterns of influence characterizing the reading groups remain stable.

(7) That, the influence patterns of the low third grade reading groups are more like those of low first grade reading groups than the high, average or combined third grade reading groups, in that their influence patterns are more direct.

(8) That, while there is some variability in the patterns of verbal interaction in some classes, and in some reading groups from day to day, the trends in the direct and indirect nature of the lessons of the reading groups tends to remain stable.

The Focused Interaction Episode in Reading

(1) That, teachers of reading subscribing to the same method of teaching reading, specifically, the basal reading approach, do emphasize different aspects of the program in their reading classes.

(2) That, teachers of reading subscribing to the same method of teaching reading, specifically, the basal reading approach, emphasize different reading activities, in accordance with their perceptions of the abilities and/or achievements of groups of learners whom they have identified as high, average, and low.

(3) That, the conventional wisdom of the basal reading approach which dictates that both word perception skills and comprehension skills should be taught concurrently, may not be articulated under normal classroom conditions with groups of pupils perceived by their teachers as more or less able learner readers. While the program usually emphasizes that there should be opportunities for pupils to acquire meaning in reading along with the acquisition of word perception skills, high and average reading groups seem to have a better balanced program compared to low reading groups. In all classes, at both grade levels, the trend was for the lessons of the low group to focus upon the word perception task. Apparently when pupils have difficulty coping with the task of translating the written symbols to their spoken counterparts, activities for developing comprehension skills are set aside. On the

basis of the findings it could be concluded, that while low reading groups continue to use the materials of the basal reading program, they are not taught to read by the basal reading approach to the same extent as their more able peers. Moreover, it could be concluded that the failures of low achievers in what are ostensibly basal reading classes may not be due to the failure of the basal reading program per se, but perhaps to the decisions teachers make in emphasizing one part of the program over another, in line with their perceptions of learners' needs. In other words, the results support the conclusion that in implementing the basal reading program under the normal conditions of the classroom, teachers are influenced as much by their perception of the needs of learners as by the stated objectives and activities of the basal reading approach.

(4) That, teachers' reading solicitations are key factors in the analysis of the reading lesson. Through the solicitations, the reading teacher controls pupil responses by structuring the content of the response and by designating materials read aloud. To some extent, the teacher sets the stage for her own reactions when pupils are asked to comply with reading solicitations which are too difficult or too easy. If pupils make fewer unacceptable responses, then they receive fewer teacher corrective reactions.

(5) That, the proportion of the class time taken up with oral reading will depend upon the solicitations of the teachers, which in turn reflect the ability designation of the pupils. The lower the reading group, the greater the emphasis on oral reading. In third grade classes, when more able groups are compared with low groups, these differences are highly visible and clearly differentiate the observed ver-

bal patterns.

(6) That, the emphasis on word perception skills tends to result in the responses of grade one pupils, and low achievers at both grade levels, being restricted to oral reading responses. Even where solicitations appear to focus on comprehension, low group pupils were more likely to be called upon to read aloud their responses. Such responses, because of the requirement of perfection in the translation process, often resulted in the readers, and especially those identified as low achievers, being exposed to more teacher corrective reactions. Because less able readers have more difficulty with the translation task, they are the recipients of a greater proportion of teacher corrective reactions.

(7) That, the reading materials selected for the low reading group to read aloud may be inappropriate in terms of the abilities of the learner-readers. There was evidence that the less able readers made a disproportionate number of miscues per oral reading response than more able readers.

(8) That, beyond the differences in the emphasis upon word perception and comprehension in the reading programs of the different ability groups, when the comprehension solicitations of different groups are compared, the interpretative skills are emphasized more for the higher reading groups, while the literal comprehension skills are emphasized more for the less able readers.

(9) The opportunities that pupils have to engage in activities aimed at developing the higher level comprehension skills, or the opportunities they have for relating the content of the reading selections to their store of information and/or personal experiences, are

restricted by the level of the reading group to which they have been assigned.

(10) That, while teachers modify the reading program in accordance with their perceptions of the abilities and/or achievements of the learner-readers in their classes, those modifications do not meet the assumptions basic to grouping as an organizational plan to account for the needs of different levels of learners. Not only are pupils' responses in low reading groups met by a greater proportion of teacher corrective reactions, but, high reading groups have considerable difficulty responding correctly to the more complex word analysis solicitations and the interpretative-type questions directed at them.

(11) That, in teaching word analysis skills, "basal reading" teachers depend mainly upon their intuitive understandings of the word analysis skills required by readers, and tend, therefore, to develop word analysis lessons in line with those perceptions. As a result, certain skills seem to be emphasized to the exclusion of others and there is no apparent sequential introduction or reinforcement of the skills of word analysis.

(12) That, pupils in low reading groups seem to exhibit less confidence in the process of acquiring skill in reading, at least as indicated by the types of miscues recorded in their oral reading responses (hesitations) and their apparent failure to correct the overt miscues of their peers in the oral reading lesson.

(13) That, despite the obvious intention of the oral reading activity to be related to the development of pupils' word perception abilities, there was little relationship between the nature of the oral reading miscues and the teacher's reacting behavior. Whatever the

specific nature of the miscue, teachers reacted mainly by providing the next word in sequence.

(14) That, the problems of the readers perceived as less able are acute was highlighted by the similarities in the kinds of activities aimed at the low reading groups at the two grade levels. Not only were the activities of the low third grade reading groups very similar to grade one low groups, but the differences in the content of the verbal behaviors of the low grade three and the other grade three groups were highly visible.

(15) In discussing the related research it was pointed out that teachers and pupils alike have some difficulty coping with the stumbling oral reading performance that is natural for beginning readers. The findings of this study support that position in that other pupils could not refrain from correcting their peers when they hesitated, or made other miscues, while reading aloud.

(16) That, the teacher's presence during the oral reading lesson may not be crucial since there were clear indications that pupils were capable of correcting the miscues of readers in the same way as the teachers (by providing the next word in sequence).

(17) As pupils reach increasing levels of competency with the word perception task, the differences among readers in terms of their abilities and/or achievements in reading appear to become less visible, and teachers seem not to be so conscious of differences. If the teacher fails to perceive differences, then the grouping of pupils who have been identified as high and average groups into one reading group would be a logical move.

(18) Teachers make a point of meeting less able readers in a

small group context more often than they meet more able readers. Moreover, there are indications that such groups are smaller. Given these conditions, it could be concluded that the number of contacts between the teacher and individual low group pupils are proportionately higher than for the more able readers. Recognizing this possibility, and given the knowledge about teacher corrective behavior, it may be concluded that individual low group pupils are receiving more teacher criticism than individual pupils who have been identified as more able.

(19) By the third grade level, high reading groups are more likely to be left on their own to teach themselves to read through instructional materials assigned them by the teacher.

Many of the conclusions offered in this section have been discussed by those who have observed basal reading groups in self-contained classrooms. However, whereas others have reported these conclusions as impressions, in this study, the conclusions are based upon empirical evidence drawn from an exact analysis of the observed classroom behavior of teachers and pupils engaged in the processes of teaching and learning reading.

IMPLICATIONS OF THE STUDY

The findings and conclusions of the investigation give rise to the following implications, which should be considered seriously by reading teachers, those concerned with the preparation of reading teachers, and those involved in the administrative decisions which affect reading classes.

In the field of reading, there are constant references to approaches

to the teaching of reading which rest on the assumption that teachers who have been provided with prescriptive details for using a certain method, as well as the materials basic to the method, are teaching reading in an identical way in their independent classrooms. Certainly, that assumption is basic to the many comparative studies of reading methods which abound in the literature. However, the findings of this study seriously question that assumption, for not only does the evidence suggest that the teachers emphasized different activities in their reading lessons, but that they emphasized quite different activities with the reading groups in their self-contained classes. To imply that teachers were using the basal reading method, as if that were a meaningful description of the behavior observed in these classes, was not warranted on the basis of the findings.

To some extent, however, the analysis revealed a kind of paradox, at least when the lessons of the different reading groups across the classes were examined and compared. While the lesson content varied with the reading groups, there were interesting similarities across classes when the group level was held constant. This would imply that while teachers might differ in their specific activities, they were in agreement about the general content of the lessons with readers who were perceived to be more or less able.

In considering the basal reading approach as articulated in lessons of the reading groups, the implication was that the basis for designating the classroom approach as the basal method seemed to depend largely upon the provision of materials from a specific program for use in the classroom. That the prescriptions for using the materials were not followed would imply that the teachers made decisions about lesson

activities, based upon their own concepts of what was important in the learning to read process for different types of learners. It could be argued, that in most instances, the basal reading approach was operating in name only in the reading group lessons observed.

The emphasis on word perception among less able readers implies that teachers took the initiative in setting aside the major assumption of the basal reading approach--that word perception and comprehension skills should be taught concurrently. That teachers failed to identify a specific approach to the development of pupils' word perception abilities suggests that the method of teaching these skills was one based upon their own knowledge of the word analysis skills required by less able reader-learners. While one could concede that the teachers had necessary and sufficient knowledge to implement such a program, the results implied that this may not have been the case.

In stressing the word perception component, teachers primarily called upon pupils to read aloud selected words, phrases, or passages in their readers. The implication was that teachers seemed to agree that if pupils had constant practice in translating written symbols to their spoken counterparts, that practice, in itself, would bring about improvement in the reading abilities of pupils.

In most classes, the emphasis on oral reading meant that pupils moved through the readers at a rate which soon resulted in their reading selections which seemed to be too difficult, at least as indicated by a disproportionate number of miscues being recorded. That the teachers continued to present pupils with the materials suggests that they perceived the materials as a means for practice in word perception.

Because less able readers made a disproportionate number of mis-

cues, their responses were met by more teacher criticism, as expressed in the teacher corrective reactions to the oral reading miscues.

Apparently, the teachers perceived their corrective reactions as an integral part of the learning experience for the less able readers, even though, the analysis showed that other pupils in the group could react to the reader in much the same way as the teacher.

That teachers tried to praise pupils in the low groups as often, or even more often than in the other groups implies that teachers may have been conscious of their criticism and were trying to balance their reactions in relation to the less able learners.

In attempting to understand why teachers did not take other positive steps toward setting the conditions where less corrective reaction would be demanded of them, it could be implied that the reading behavior of the less able readers was simply reinforcing teachers' perceptions of, and expectations for, less able readers. That is, less able readers did not read well and that behavior reinforced the teachers' expectations. This would imply that the failures were simply accepted as a natural fact of classroom life by the teachers. It could be implied that teachers had no appreciation for the effects that might be achieved if less difficult materials were used in the reading lesson. It also implies that the teachers had little understanding of the need for reading materials at pupils' instructional levels. Of course, while the guidebooks recommend that supplementary practice be provided for less able readers, materials are not specifically provided for by the publishers. If less able readers require to spend more time at each level, in their acquisition of the skills of reading, then this would suggest surely that such materials should be made available as an integral

part of the basal reading program. Given the materials provided, teachers may have been trusting the judgments of the basal authors that the materials were adequate for the purpose of teaching pupils at their respective levels.

Beyond oral reading experience, teachers also introduced other word analysis skills through their solicitations. Yet, the results indicate that these were introduced on a random basis by most teachers. If teachers are correct in their assumption that less able readers require more activities aimed at increasing their word perception skills, then this might imply that there is also a need for a more carefully structured and sequentially designed program for introducing and reinforcing those skills. In view of the continued problems that these readers had with the word perception task, (consider the position of the low third grade readers) it could be implied that the random activities in this area did not meet pupils' needs.

The importance of the role played by the reader materials in the observed lessons rests primarily upon the points made above regarding the role of oral reading in the lessons of less able readers. However, since teachers controlled what would be read aloud by the pupils, the final responsibility for the problems pupils had in responding had to be accepted by the teachers. This would imply that teachers must take the initiative and examine the effects of their curricular decisions in terms of the learners in their classes. The implication here is that this would be a first step toward the amelioration of some of the problems pinpointed thus far. Possibly, in recognizing the influence one exerts as a teacher on the experiences of the children in the read-class, it would become increasingly difficult to avoid taking positive

steps toward improvement.

If the problems of the less able reader, such as those which have been pointed up here, are ignored, the negative results for the learner are bound to have serious consequences. The greatest danger is that the problems of the less able reader could become compounded by the negative nature of his experiences in the reading lesson. By being exposed to constant teacher corrective reaction, which is to imply exposure to constant criticism, the reader may lose all confidence in whatever abilities he does have to learn to read. Given continued criticism, and a general sense of failure, the pupil may fail to exert the energy necessary for acquiring skill in reading. There was limited evidence to suggest that less able readers seemed less confident in their approach to reading. The implication is that if we are to pay more than lip-service to the idea that each pupil should have an opportunity to learn to read at a level commensurate with his ability, then it is imperative that the actions taken in the reading class do not mitigate against that possibility.

Since the amount of criticism recorded for the low third grade groups was similar to the amount recorded for the low first grade groups, this implies that pupils who have difficulty learning to translate the written word to the spoken word, probably endure continued criticism throughout the primary grades. Since the amount of criticism recorded for the high grade three groups decreased when compared with the high first grade groups, this clearly points up the role of the translation task as an influence on the patterns of interaction that characterized the reading lessons in the different groups.

Apparently, many decisions about readers are based upon the degree

to which they can handle the translation task, at least this comes through when it is recalled that the content of the verbal behavior in the lessons of the combined groups was more like that of the high rather than the average groups at the third grade level. The implication of this finding is that more must be done to insure that pupils are either not placed in a position where their deficiencies in this area are so highly visible, or that positive steps be taken to insure that those abilities are developed.

Many of the points made thus far suggest that while teachers did modify their behavior in line with their perceptions of the abilities and/or achievements of the reading groups, those modification may not have been congruent with the major assumption of grouping: that methods and materials should be modified according to the instructional levels and needs of the learners. For example, while much of the discussion has focused upon the problems of the low group, there was evidence that the tasks set for the high groups may not have been realistic in terms of their abilities and/or achievements. This implies that teachers have difficulty providing for pupils in their classes who are at either end of the achievement spectrum and suggests that teachers require more help and guidance in making decisions about the reading activities which are best suited to the different levels of readers.

That the assumptions of grouping were not met adequately in these classes raises some interesting questions about those studies which have attempted to determine the value of groups as an organizational procedure for meeting the range of differences among readers in the normal classroom. When grouping is criticized, it must be clear whether grouping as practiced, or grouping as recommended, is on trial.

Given those conditions where the assumptions are met, grouping might possibly prove to be a viable plan, causing less difficulty for the teacher in its implementation than other approaches such as individualized instruction. Of course, these same points apply when the effectiveness of any particular method or approach to the teaching of reading is examined. Unless classroom practices parallel the principles underlining the approach, can the approach be faulted if the results do not indicate improvements among the learners? Of course, those responsible for introducing an innovation must insure that the drawing-board prescriptions can be translated into classroom practice, and that teachers are given opportunities to learn whatever skills are necessary to implement the procedures under normal classroom conditions.

While the discussion thus far has considered the findings and conclusions in terms of their implications for the classroom teacher, simple directives to teachers to change their behavior in order to engage in new activities in the reading class are not likely to bring results. It should be clear from the foregoing discussion that many of the changes recommended require that teachers have the full support of the administrative staff. If for example, teachers are led to believe that judgments of their teaching abilities will be made on the basis of the point their pupils have reached in the reader, then they will react by attempting to push pupils ahead at a rate that may be unrealistic in terms of their abilities or levels of accomplishment. Unless steps are taken to insure that the teachers' decisions to proceed slowly are supported, then they will be less receptive to the idea of proceeding more slowly. Similarly, it is one thing to recommend that teachers introduce structured and sequential word analysis pro-

grams and supplementary reading activities, but unless support is provided, by making such materials available, the teacher, left with the basal readers and a small selection of trade books may be hard pressed to provide the kind of programs suggested. Moreover, if we take seriously the findings that teachers will utilize such materials according to their perceptions of how reading should be taught, we may expect that these new materials and programs may not provide the answer. Indeed, innovations, whatever they may be, will require that time be made available to free the teacher from her normal teaching routines so that she may acquire the knowledge and skills demanded by the new materials and suggested activities. Whether the suggestions made here are followed or not, careful introduction to innovations must be acknowledged as a vital concern at the time the innovations are introduced. Otherwise, we may expect that the innovations will themselves be changed, and that life in the reading class will go on very much as before.

These points have serious implications for those responsible for educating the reading teachers as well. For example, perhaps global prescriptions about the teaching of reading must be backed up with careful expository statements and practical experiences as to how certain tasks are to be performed. For example, if teachers must make the decisions about the instructional levels of their pupils, then it follows that they require experiences that provide them with the skills needed to make those decisions.

While future teachers of reading must have a certain flexibility in order to meet the changing demands upon their professional competencies, that flexibility will depend mainly upon the understanding they have of the reading process, especially as that process relates

to the teaching procedures to be followed with different types of learners. While "cookbooks" are not the answer, the implication is that teachers require both theoretical and practical knowledge, that will allow them to fulfill their role as curriculum decision maker in the reading class setting, as that role was indicated by the findings of this study.

Teacher educators must be prepared to identify the subject matter of the teaching of reading, and then plan relevant teacher education experiences that will assure that the beginning teacher proceeds to the classroom armed with the knowledge she requires. The analysis suggested that teachers' understandings of the phonics and structural analysis principles they were teaching were not well developed. How many beginning teachers leave their college reading courses without that information and/or knowledge of linguistics for example, that may be required of them as they attempt to put new practices to work in their reading classes? Even if this information cannot be made explicit in the reading course, some concern must be given to insuring that beginning teachers are fully cognizant of the requirement, that they will have to continue to learn about reading, if they are to do an effective teaching job in the reading class where such principles may be basic to the reading program they are using.

While there are some who would argue that it would be a retrogressive step, and possibly a threat to the professional role of the teacher, where teachers lack this knowledge they may require on the job training and careful supervision in implementing their classroom program in reading. Supervisory personnel would need to work closely with the teachers to insure that programs were implemented according

to the specifications.

To some extent, many of the comments in the discussion thus far relate back to an implication arising from the finding of this study that teachers' reading solicitations are the most important behaviors to be attended to in the analysis of the teaching of reading. The solicitations are the vehicles through which the teacher articulates the objectives of her reading program, as she perceives them. Furthermore, inherent in the solicitations are the predictive elements of the subsequent types of responses made by pupils, and to some extent, the likelihood of certain teacher reactions over others. If the solicitations are so important, then this would imply that steps must be taken to insure that teachers, including student teachers, have opportunities to become aware of the impact of their solicitations and the degree to which they influence the verbal interaction in the reading class, especially in relation to their perceptions of the abilities and/or achievements of the pupils in their classes. There may be value in providing teachers with an analytical tool such as the Observational System for the Analysis of Primary Reading Lessons which could be used by them to better understand their behavior and the behavior of their pupils. Conscious awareness of the patterns of interaction in one's reading class may be a significant step forward to the improvement of the teaching of reading.

SUGGESTIONS FOR FUTURE RESEARCH

There is a need for continued analyses of teacher-pupil verbal interaction in primary reading lessons. While such studies might lend

support to the conclusions of this investigation, it is not unlikely that some of the ideas presented here would be challenged, and that a number of new ideas would be generated. In view of the difficulties, financial and otherwise, that a researcher might expect to encounter, these studies might depend more upon the use of the Observational System for the Analysis of Primary Reading Lessons, in its present, and in suitably modified forms. Such studies would not only reveal more about the affective and cognitive dimensions of the verbal behavior of teachers and pupils in primary reading classes, but could lead to refinements in the instrument that would increase its value as an observational tool.

The results of this investigation support the position of many reading educators that further studies of the teaching of reading must attend to the behavior of the reading teacher, especially when innovations in reading are being investigated. It is the teacher who must implement new procedures under the natural conditions of the classroom, and how they accomplish that task should be a major area of concern. The Observational System for the Analysis of Primary Reading Lessons, with suitable modifications, might make such studies possible, without too much difficulty.

The Observational System for the Analysis of Primary Reading Lessons might be applied in studies of the teaching of reading above the first three grades. Not only could the instrument prove useful in the analysis of lessons at that level, but undoubtedly, suggestions would be made for appropriate changes in the instrument to insure its value in analyzing the teaching of reading at many levels.

The present form of the Observational System for the Analysis of

identified as high, average, and low.

Conclusions similar to those of this study have been expressed by others. However, the analyses carried out here have provided empirical evidence to support the cursory and generalized impressions of those who have reported upon their observations in primary reading classes.

While the reader may choose to focus upon different findings from the study, there can be little doubt that in the long run its greatest contribution toward the improvement of the teaching of reading may depend upon the uses to which the Observational System for the Analysis of Primary Reading Lessons, in its present and modified forms, is put. That system, because it is grounded in a thorough analysis of the teaching of reading, and because the observational model upon which it is based has been well tested, may provide an instrument that will allow us to move ahead with the task of determining those behaviors that will insure, the effective teaching of reading.

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APPENDICES

APPENDIX A

BASAL READING SERIES USED IN THE
OBSERVED CLASSES

BASAL READING SERIES USED IN THE
OBSERVED LESSONS

SERIES	CLASSES BY GRADE LEVEL	
	One	Three
The Ginn Basic Readers (Revised Ed.) Toronto: Ginn & Co., 1967	3	3
The New Basic Reading Program Curriculum Foundations Series Toronto: W.J. Gage, 1956		2
The New Basic Reading Program Curriculum Foundations Series Toronto: W.J. Gage, 1963	1	
Young Canada Reading Series Don Mills: Thomas Nelson & Sons, 1960	1	

APPENDIX B

GUSZAK'S READING COMPREHENSION QUESTION-
RESPONSE INVENTORY (ADAPTED)

RECOGNITION. These questions call upon the students to utilize their literal comprehension skills in the task of locating information from reading context. Frequently, such questions are employed in the guided reading portion of a story, i.e. Find what Little Red Ridinghood says to the wolf.

RECALL. Recall questions, like recognition questions, concern literal comprehension. The recall question calls upon the student to demonstrate his comprehension by recalling factual material previously read. Generally, such activity is primarily concerned with the retrieval of small pieces of factual material, but the size of the pieces may vary greatly. An example of a recall question would be the following where the answer to the question is clearly printed in the text, i.e. What was Little Red Ridinghood carrying in the basket?

TRANSLATION. Translation questions require the student to render an objective, part-for-part rendering of a communication. As such, the behavior is characterized by literal understanding in that the translator does not have to discover intricate relationships, implications, or subtle meanings. Translation questions frequently call upon students to change words, ideas, and pictures into different symbolic form as is illustrated in the following from Bloom (1956).

Translation from one level of abstraction to another; abstract to concrete, lengthy to brief communication, i.e. Briefly re-tell the story of Little Red Ridinghood.

Translation from one symbolic form to another, i.e. Draw a picture of the first meeting between Little Red Ridinghood and the wolf.

Translation from one verbal form to another; non-literal statements to ordinary English (metaphor, symbolism).

CONJECTURE. These questions call for a "cognitive leap" on the part of the student as to what will happen or what might happen. As such, the conjecture is an anticipatory thought and not a rationale, i.e. What do you think that Little Red Ridinghood will do in the future when she meets a wolf in the forest?

EXPLANATION. Explanation questions, like conjecture questions, are inferential in nature. However, the inference involved in the explanation situations calls upon the student to supply a rationale. The rationale must be inferred by the student from the context developed or go beyond it if the situation is data-poor in terms of providing a rationale. Instances of explanatory behaviors are found in the following: explanations of value positions, i.e. Explain why you like Little Red Ridinghood best?; conclusions, i.e. Explain why the wolf wanted to eat Little Red Ridinghood; main ideas, What is the main idea of this story?

EVALUATION. Evaluation questions deal with matters of value rather than matters of fact or inference and are thus characterized by their judgmental quality (worth, acceptability, probability, etc.) The following components of this category are adapted from a classification scheme by Aschner and Gallagher (1965).

Questions calling for a rating (good, bad, true, etc.) on some item (idea, person, etc.) in terms of some scale of values provided by the teacher, i.e. Do you think that this was a good or bad story?

Questions calling for a value judgment on a dimension set up by the teacher. Generally, these are "yes" or "no" responses following questions such as "Would you have liked Tom for a brother?"

Questions that develop from conjectural questions when the question is qualified by probability statements such as "most likely." "Do you think that it is most likely or least likely?"

Questions that present the pupil with a choice of two or more alternatives and require a choice, i.e. "Who did the better job in your opinion, Mary or Susan?"

Guszk (1967, p. 228-229).

APPENDIX C

COPY OF THE PROFESSIONAL DATA QUESTIONNAIRE
USED IN THE INFORMAL INTERVIEW

TEACHER PROFESSIONAL DATA INTERVIEW FORM

(IA Study)

I. TEACHING EXPERIENCE

1. Number of years of teaching experience.
2. Number of years of experience at this level.
3. Other primary teaching experience.
4. Teaching experience in Grade IV and above.

II. EDUCATIONAL BACKGROUND - GENERAL

1. Nature of training preceding first full time teaching experience.
2. Type of subsequent teacher education, if any.
3. Additional formal study.

III. EDUCATIONAL BACKGROUND - READING

1. First reading course.
2. Subsequent reading course(s).
3. Informal study of reading (in-service, non-credit, etcetera).
4. What other formal course work has influenced your teaching of reading?
5. What are the major sources of your ideas about how to teach reading?

IV. GROUPING PRACTICES

1. Have you always grouped for reading?
2. What other organizational plans have you used?
3. Why do you group for reading instruction?

4. Do you think grouping makes your teaching task easier or more difficult (Advantages? Disadvantages?)?
5. How do you assign pupils to their reading group?
6. Have any pupils changed their reading groups since they were established?
7. Do you bring your class together as a whole for reading? For what types of activities?

V. BASAL READING PROGRAM

1. Why do you teach reading by the basal reading method?
2. Have you ever used any other method for the teaching of reading?
3. Do you supplement the basal reading program? Describe the activities.

4. If you do provide supplementary activities, do you maintain your reading groups for these lessons?

5. What use do you make of the series grade book?

6. What materials available for the program do you use?

VI. OTHER

If you had a choice would you continue to use your present reading program, or would you consider changing your approach?

(1) If stay with basal - why?

(2) If change -

a) to what program

b) why

c) what would influence your opportunity to try out the new program?

APPENDIX D

REPORT OF THE PATTERNS OF PUPIL-PUPIL VERBAL
INTERACTION IN THE INDEPENDENT READING GROUPS

REPORT OF THE PATTERNS OF PUPIL-PUPIL VERBAL INTERACTION IN THE INDEPENDENT READING GROUPS

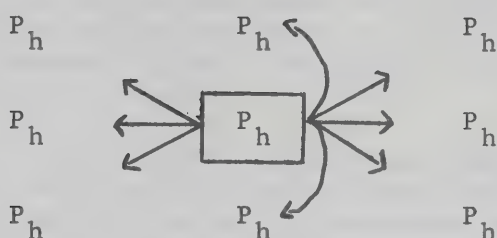
While the main purpose of this study was to describe the patterns of teacher-pupil verbal interaction in the reading groups, during the course of the study it was recognized that the patterns of pupil-pupil interaction deserved some study as well. For example, in one class where the behavior of the teacher was very directive, the amount of aggressive behavior displayed by one pupil toward another during the observed lessons was enough to draw attention to it. Similarly, it was apparent that the amount of pupil-pupil interaction in those groups working independently of the teacher varied from class to class. The audio-tapes which were recorded throughout the group lesson also indicated considerable discussion among members of the reading groups as they waited for their teacher to join them for the lesson. However, as noted above, this interaction was beyond the limitations of the present study and while the anecdotal records make mention of some interesting events, pupil-pupil interaction was not the subject of the analysis.

In the third grade one class observed, the investigator was asked by the teacher to offer some advice on how a child who was having difficulties with reading might be helped. The investigator declined to comment at the time but promised that if any ideas materialized over the visits these would be discussed once the observation sessions were completed. While the investigator worried that even this intimation might affect the behavior of the teacher, it seemed a better plan than simply refusing to comment.

The child in question had a severe speech impediment and apparently suffered from some language retardation as well. In attending to the behavior of this child, it was noticed that when he was working independently he tended to interact quite freely with the pupil who was seated in front of him and the pupil who was seated behind him. He did not, however, converse with the pupil in the seat beside him. Gradually, the investigator became aware that this child was interacting only with members of his own reading group. The child to his right belonged to another reading group. This observation raised an interesting question. Was the observed pattern specific to this child, or was it true that members of different reading groups tended not to interact during the independent reading period? Having considered this question, the decision was made to record in this class and in the classes to follow who interacted with whom in the independent groups.

The observations discussed here were necessarily sporadic since the investigator's attention was focused mainly upon the interaction in the teacher-directed reading group. However, within that limitation, the evidence in this class and the six that followed suggested that pupils interacted mainly with other pupils assigned to the same reading group. Moreover, interaction within the reading group was restricted by the class seating arrangement.

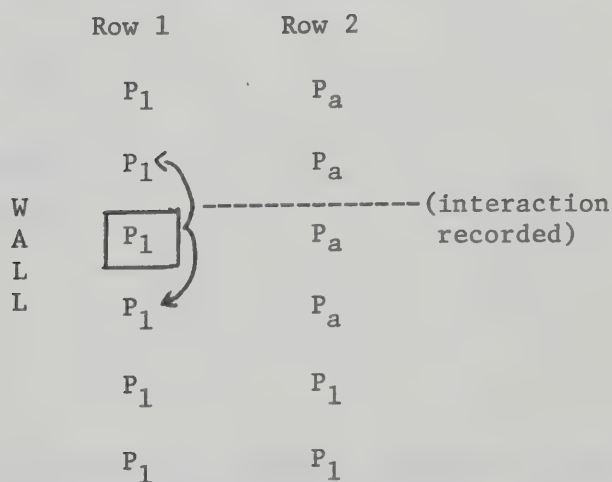
The pattern of the pupil-pupil interaction was, at its optimum, as follows:



P = pupil
h = high group

so long as each P was a member of the same reading group. Where P was not a member of the same reading group there was no interaction recorded in any class, except under those conditions where one pupil in a higher group was responsible for "marking" the work of those in lower groups.

In the case of the pupil whose behavior directed the observer's attention to this phenomenon, the seating arrangements offered very limited chances for interaction, for as the diagram below shows, there were no pupils seated to his left and only average group pupils to the right.



a = average
1 = low

group were responsible for checking and correcting the work completed by pupils in the other groups. Under these conditions the high group pupils were in an authority role and the interaction tended to be one-sided, since the high group pupils told the others what was right or wrong. In one class the children were seated around tables and pupils from each of the different groups were seated together. In this class pupils from the different groups did interact, but often the interaction was somewhat aggressive.

In only three of the ten classes was it apparent that the pupils' reading group assignment did not determine their desk assignment. In all other classes pupils in the same reading group were seated in very close proximity. While there are obvious administrative advantages to this plan, these observations raise serious questions about the social isolation that may result from these seating arrangements. If the patterns of interaction through the course of the whole day are influenced in the same way that the interaction in the reading lesson were influenced, then this would provide strong evidence to suggest that the influences of learning reading are much more significant in the life of the child than we often appreciate. If one's reading accomplishments affect one's relations with peers to the degree suggested here, then we must surely ask what it is that is going on in the reading class to promote the kinds of relationships noted here. Returning to the theory basic to the investigation, it could be asked how low achievers in reading see themselves through the eyes of others? Moreover, what is happening in the classroom to make the perceptions of others so pronounced, even after a few months in grade one? These questions cannot be answered here, but they certainly deserve more careful study.

APPENDIX E

SAMPLE PAGE FROM THE VERBATIM
TYPEWRITTEN TRANSCRIPTS PREPARED
FROM THE AUDIO-TAPE RECORDINGS

1313....3....261

OK...

YOU'VE HAD THIS WORD...WHAT IS IT...

at..at....

ALL RIGHT..

WHAT'S THIS WORD...?

hat...hat...hat...

PUT A...

hat...

HUH HUH...

HAT..HAT....

hat...

THAT'S RIGHT...

WHAT'S THIS ONE THEN?

AND THIS...

bat...bat...bat....

BAT...

fat...fat...fat...

OK..

THIS IS ONE OF THE NEW ONES...THE FIRST ONE..WHAT WAS IT?...

hat...hat

OK...

NOW...THE NEXT ONE STARTS WITH...YOU CAN'T GUESS YET HUGH...YOU HAVEN'T

SEEN ENOUGH OF IT...STARTS WITH WHAT SOUND...

P...

APPENDIX F

FLANDERS' INTERACTION ANALYSIS:

DESCRIPTION OF THE PROCEDURES

FLANDERS INTERACTION ANALYSIS:

DESCRIPTION OF THE PROCEDURES

Flanders' Interaction Analysis is based upon the categorization of observed classroom behavior according to ten categories. Flanders (1967) has described each of the categories in detail. Selected comments pertaining to the behaviors included in the different categories are reproduced here from Flanders (1967, pp. 122-124).

CATEGORY 1, ACCEPTANCE OF FEELING. The teacher accepts feelings when he says he understands how the children feel, that they have the right to have these feelings, and that he will not punish the children for their feelings. These kinds of statements often communicate to children both acceptance and clarification of the feeling.

Also included in this category are statements that recall past feeling, refer to enjoyable or uncomfortable feelings that are present, or predict happy or sad events that will occur in the future.

CATEGORY 2, PRAISE OR ENCOURAGEMENT. Included in this category are jokes that release tension, but not those that threaten students or are made at the expense of individual students. Often praise is a single word: "Good," "fine," or "right." Sometimes the teacher simply says, "I like what you are doing." Encouragement is slightly different and includes statements such as, "Continue." "Go ahead with what you are saying." "Uh, huh; go on; tell us more about your idea."

CATEGORY 3, ACCEPTING IDEAS. This category is quite similar to category 1; however, it includes only acceptance of student ideas, not acceptance of expressed emotion. When a student makes a suggestion, the teacher may paraphrase the student's statement, restate the idea more simply, or summarize what the student has said. The teacher may also say, "Well, that's an interesting point of view. I see what you mean." Statements belonging in category 3 are particularly difficult to recognize; often the teacher will shift from using the student's idea to stating the teacher's own idea.

CATEGORY 4, ASKING QUESTIONS. This category includes only questions to which the teacher expects an answer from the pupils. If a teacher asks a question and then follows it immediately with a statement of opinion, or if he begins lecturing, obviously the question was not meant to be answered. A rhetorical question is not categorized as a question. An example of another kind of question that should not be classified in category 4 is the following: "What in the world do you think you are doing out of your seat, John?" With proper intonation the question is designed to get John back in his seat; if such is the case, it must be categorized as criticism of the student's behavior (category 7).

CATEGORY 5, LECTURE. Lecture is the form of verbal interaction that is used to give information, facts, opinions, or ideas to children. The presentation of material may be used to introduce, review, or focus the attention of the class on an important topic. Usually information in the form of lecture is given in fairly extended time periods, but it may be interspersed with children's comments, questions, and encouraging praise.

Whenever the teacher is explaining, discussing, giving opinion, or giving facts or information, category 5 is used. Rhetorical questions are also included in this category. Category 5 is the one most frequently used in classroom observation.

CATEGORY 6, GIVING DIRECTIONS. The decision about whether or not to classify the statement as a direction or command must be based on the degree of freedom that the student has in response to teacher direction. When the teacher says, "Will all of you stand up and stretch?" he is obviously giving a direction or command. When he says, "John, I want you to tell me what you have done with your reader," he is still giving a direction.

CATEGORY 7, CRITICIZING OR JUSTIFYING AUTHORITY. A statement of criticism is one that is designed to change student behavior from non-acceptable to acceptable. The teacher is saying, in effect, "I don't like what you are doing. Do something else." Another group of statements included in this category are those that might be called statements of defense or self-justification. These statements are particularly difficult to detect when a teacher appears to be

explaining a lesson or the reasons for doing a lesson to the class. If the teacher is explaining himself or his authority, defending himself against the student, or justifying himself, the statement falls in this category. Other kinds of statements that fall in this category are those of extreme self-reference or those in which the teacher is constantly asking the children to do something as a special favor to the teacher.

CATEGORY 8, STUDENT TALK: RESPONSE. This category is used when the teacher has initiated the contact or has solicited student statements, when the student answers a question asked by the teacher, or when he responds verbally to a direction the teacher has given. Anything that the student says that is clearly in response to initiation by the teacher belongs in category 8.

CATEGORY 9, STUDENT TALK: INITIATION. In general, if the student raises his hand to make a statement or to ask a question when he has not been prompted to do so by the teacher, the appropriate category is 9.

Distinguishing between Categories 8 and 9 is often difficult. Predicting the general kind of answer that the student will give in response to a question from the teacher is important in making this distinction. If the answer is one that is of a type predicted by the observer (as well as the teacher and class), then the statement comes under Category 8. When in response to a teacher-question the student gives an answer different from that which is expected for that particular question, then the statement is categorized as a 9.

CATEGORY 10, SILENCE OR CONFUSION. This category includes anything else not included in the other categories. Periods of confusion in communication, when it is difficult to determine who is talking, are classified in this category.

Observation Procedures

Interaction Analysis requires, for its application, a trained observer who is familiar with the rationale for the Flanders' categories and the kinds of behavior characterized by each. The observer, either in the class-

room, or using audio or visual tapes of classroom verbal interaction, listens and records the category number corresponding to each behavior are recorded in sequence at three second intervals, with the sequences preserved. The three second interval is set aside, if, during the three second interval, the observed behavior changes. When this happens the category number of the new behavior is recorded. Should the general characteristics of the classroom interaction involve long periods of silence, action activities, or any other behavior inappropriate for the analysis, recording ceases, but would begin again once the interaction lends itself to the nature of the analysis.

In anticipation that observed behavior patterns will reflect the nature of the observed activities, for example, changes in subject matter content, the observer should also keep anecdotal records of the nature of the activities, and especially the changes, so that the observed patterns can be better understood and explained. Flanders' system, therefore, allows for comparison of interaction patterns as these may be associated with different types of activities in the classroom. It is this aspect of the system that made it appropriate for the present descriptive comparison of reading lessons in different reading groups.

Preparation of the Matrices

Listening to the verbal interaction between the teacher and the pupils in the classroom (or audio or visual tapes), the observer records the number corresponding to the appropriate category describing the observed behavior. For example, if the teacher is lecturing to the pupils, at each three second interval as the teacher speaks on, a Category 5 would be recorded. The record, then, would show a series of 5's. If the teacher closed out her lecturing behavior by asking a question, the number 4, corresponding to the question category, would be recorded. If the question went on longer than three seconds, another 4 would be recorded. When a pupil attempts to respond to the question, an 8 would usually be noted. Again, if the pupil response took longer than three seconds, a second 8 would be recorded. If, by chance, in responding to the teacher's question, the pupil interjected a comment which was peripheral to the response expected, for example, the expression of an opinion related to the topic, that behavior would be recorded as a 9. These numerical

identifiers of the observed behavior are not recorded randomly but, instead, the actual sequence of the observations as categorized is maintained. For example, the hypothetical interaction just described would be recorded as follows: 5, 5, 5, 5, 4, 4, 8, 8, 9. The maintenance of the sequence in the recording of the observed behavior is critical, for the subsequent analysis is dependent upon the observational record of behavior sequence having been maintained. By maintaining the sequence, the pattern of behavior, that is, the relation of one behavior as it may influence or reflect another behavior, can be examined.

Once the sequence of categories for a specific lesson, or the part of a lesson under study has been completed, interpretation calls for the categories to be entered into a 10 row by 10 column matrix. The tabulations in this matrix are based upon pairs of numbers in sequence, with the first number indicating the row designation and the second number indicating the column designation. The numbers are paired so that each pair overlaps with the previous pair and, therefore, with the exception of the first and last category number, each is used twice in displaying the observed behavior in the matrix design. To account for the overlap, convention calls for a 10 to be entered at the beginning and end of each of the recorded sequences. The convention has some basis in reality since one might expect a lesson to begin and to end with some sort of silence or confusion. Table F.1 shows a sample sequence of observations indicating how the pairing takes place in preparing the matrix. A sample matrix is also included, based upon the observed behavior as recorded.

Analysis of the Matrices

The matrices may be analyzed both descriptively and statistically in order to reveal differences within and across a number of matrices, as required.

Statistical comparison of matrices. According to Flanders, the statistical analysis of differences between one or more matrices may be determined by using Darwin's Chi-Square test for significance of difference.

Given two or more matrices, the null hypothesis concerning the matrix distributions can be tested by a

Table F.1. A Sample Sequence of Flanders' Interaction Analysis Categories Showing the Observed Behavior Recorded in the Matrix

	1	2	3	4	5	6	7	8	9	10
1										
2							1		1	
3										
4								3		
5										
6										
7				1			1			
8		2		1				1		
9										1
10				1						
Total	0	2	0	3	0	0	2	4	1	13

1st pair¹⁰
(4)
etc. (8)
(8)
(4)
(4)

2nd pair⁸
(2)
(7)
7
4
8
2

likelihood ratio criterion suggested by Darwin.
(Linnes, 1956, quoted in Flanders, 1965, p. 31)

Darwin's chi-square is reported by Flanders as more adequate than the conventional chi-square on the grounds that it accounts for the sequencing of events in the matrix.

Where the problem of comparison does not require that the sequencing factor be considered, the conventional chi-square statistic can be applied in the analysis to test for significance of difference between observed and expected frequencies. In the present study, this procedure was followed in examining some of the comparisons suggested in the next section on the descriptive analysis of the matrices.

Descriptive Analyses of the Matrix Data

The matrix serves as the basic unit for describing the observed classroom interaction. Table F.2 sets forth a typical matrix with different types of analyses indicated. For example, the matrix can be examined in terms of the following:

(1) The percentage of tallies in each column may be tabulated by summing each column separately and dividing each by the sum of the tallies in the matrix; these percentages represent the proportion of the total interaction concentrated upon each of the ten behaviors during the observed lesson or designated time period.

(2) The proportions of teacher talk and pupil talk are calculated by summing categories 1 to 7, and categories 8 and 9, respectively, and dividing each by the total number of tallies in the matrix. In the example these figures were 70 percent (teacher-talk) and 28 percent (pupil-talk). The amount of teacher talk falling in any of the seven specific categories is determined by dividing the number of tallies in any of the respective teacher-talk columns by the total number of tallies in the combined seven teacher-talk categories (1-7). The same is true for pupil talk, except that categories 8 and 9 are used.

(3) Calculation of the ratio of Indirect and Direct teacher statements is based upon the division of the total

Table F.2. A Typical Matrix (Reproduction from Amidon and Flanders, 1967, p. 36)

		Second										
First		1	2	3	4	5	6	7	8	9	10	
	1	1				1				1		
	2		4	1					2			
	3		1	6	1				2			
	4			1	14				5			
	5	1				48			6			
	6						1		4			
	7							4		1		
	8		2	2	5	6	4		11			
	9	1						1		9	1	
	10									1	2	
TOTAL		3	7	10	20	55	5	5	30	12	3	Matrix Total
%		2	4½	6½	13½	36½	3½	3½	20	8	2	

Teacher Talk

Columns 1-7 = 105

$$105 \div 150 = 70\%$$

Student Talk

Columns 8-9 = 42

$$42 \div 150 = 28\%$$

Indirect (1-4) ÷ Direct (1-4) plus (5-7) = I/D Ratio

$$\frac{40}{40} \div 40 \text{ plus } \frac{65}{105} = \frac{40}{105} = .38$$

Indirect (1-3) ÷ Direct (1-3) plus (6-7) = Revised I/D Ratio

$$\frac{20}{20} \div 20 \text{ plus } 10 = \frac{20}{30} = .67$$

number of tallies in columns 1, 2, 3 and 4 by the total number of tallies in columns 1, 2, 3, 4, and 5, 6 and 7.

(4) A revised ID Ratio (or i/d ratio) is calculated by dividing the number of tallies in columns 1, 2, and 3 by the number of tallies in columns 1, 2, 3 plus 6 and 7.

(5) Certain areas of the matrix have been identified by Flanders as particularly useful in studying the relationships among the different behaviors observed, by examining cells or cell areas where there is a build-up or absence of tallies. While Flanders has taken the initiative in interpreting certain areas of the matrix, actually every cell is open to examination and comparison as is any combination of cells. In other words, the investigator may, because of the nature of the observed behavior, choose to identify any area of the matrix for study.

Flanders (1960) has defined certain areas of the matrix which he considers very relevant. These areas are graphically displayed in Table F.3 and each is discussed below.

Area A. Consisting of the column totals (combined percentages) for the areas of the matrix comprising Indirect teacher-talk.

Area B. Consisting of the column totals (combined percentages) for the areas of the matrix comprising Direct teacher-talk.

Area C. Consisting of the column totals (combined percentages) indicating the amount of pupil-talk.

Area D. Consisting of the column total for Category 10, Silence and Confusion.

Areas A, B, C, and D provide a general picture of the interaction by answering the following questions about the observed patterns of verbal behavior:

(1) What was the percentage of talk compared with the amount of silence and confusion?

(2) What were the relative percentages of teacher and pupil-talk in the observed class situation?

(3) When the teacher did talk, what percentage of

Table F.3. Areas of the Matrix Identified

Category	1	2	3	4	5	6	7	8	9	10	Total
1	Area E										
2											
3											
4							Area I				
5											
6											
7											
8	Area G					Area F		Area J			
9											
10											
Total	Area A			Area B			Area C			D	
	Indirect teacher talk			Direct teacher talk			Student talk				

that talk involved indirect influence or direct influence patterns?

Area E. The amount of motivation behavior characteristic of the interaction can be determined from the build-up in the combinations of the 1, 2, and 3 cells. A heavy build-up in the diagonal cells 1-1, 2-2, 3-3 would indicate the degree of sustained acceptance, praise and use of pupils contributions in the interaction.

Area F. The amount of behavior in the control categories, Giving directions (Category 6) and Criticism (Category 7), is indicated in this area. Excessively high build-ups in the 6-7 and 7-6 cells would show that pupils are not complying with directives since the directives are followed by criticism. Domination of class activities by the teacher would be reflected in a build-up in the 6-6 and 7-7 cells.

Area G. Teacher responses of an indirect nature to pupils' contributions are represented in this area.

Area H. Teacher responses of a direct nature to pupils' contributions show up in this area.

Insights into the kinds of responses that pupils receive can be examined by comparing the build-up in Areas G and H.

Area I. This area indicates the types of teacher statements prompting pupil responses. By comparing the 4-8 and the 4-9 cell areas, one can determine the control influences of the questions asked. The build-up in the 4-8 cell would probably indicate a drill or review type of influence pattern, whereas a build-up in the 4-9 cell would suggest that pupil opinions and ideas were being called for in the teacher questions.

Area J. This area indicates the length of the pupil responses or sustained student-student communication in a lesson.

Areas G and H can be compared with Areas A and B in order to determine the different proportions of behavior in each. Where there are differences in the observed behavior, this could indicate that the teacher tended to act differently at the point a pupil stops talking compared with his usual behavior pattern.

If Area J and C are compared, and a large proportion of the observed behavior was recorded in Area C but not Area J, this would suggest a series of short rather than sustained pupil response behaviors in the observed class.

What these different analyses of the matrix data suggest is that the behavior observed in any class may be examined from a number of different reference points depending upon patterns observed in the classrooms. In this study, since the intention was an indepth description of the patterns of interaction in the different reading groups, the matrices have been examined in terms of each of these different perspectives on the interaction process in comparing the reading groups. The findings of the analysis relating back to these different areas of the matrix will be discussed in detail in the next chapter, as will the other statistical and descriptive analyses referred to previously and applied in this study.

The procedures described in this section were the basic procedures followed in the present study. Modifications in these procedures have been explained in detail in Chapter 4.

APPENDIX G

A SAMPLE COPY OF A CODED
(FLANDERS' ANALYSIS) IBM SCORING SHEET

463

GRADE

STUDENT NUMBER

Indicate answer by placing a mark between the guidelines as shown in the example.
Use HB pencil.

Example

(Yrs.)

MALE FEMALE

A 1 B 2 C 3 D 4 E 5

1	2	3	4	5	36	A 1	B 2	C 3	D 4	E 5	71	A 1	B 2	C 3	D 4	E 5	106	A 1	B 2	C 3	D 4	E 5
2	3	4	5	37	A 1	B 2	C 3	D 4	E 5	72	A 1	B 2	C 3	D 4	E 5	107	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	38	A 1	B 2	C 3	D 4	E 5	73	A 1	B 2	C 3	D 4	E 5	108	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	39	A 1	B 2	C 3	D 4	E 5	74	A 1	B 2	C 3	D 4	E 5	109	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	40	A 1	B 2	C 3	D 4	E 5	75	A 1	B 2	C 3	D 4	E 5	110	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	41	A 1	B 2	C 3	D 4	E 5	76	A 1	B 2	C 3	D 4	E 5	111	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	42	A 1	B 2	C 3	D 4	E 5	77	A 1	B 2	C 3	D 4	E 5	112	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	43	A 1	B 2	C 3	D 4	E 5	78	A 1	B 2	C 3	D 4	E 5	113	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	44	A 1	B 2	C 3	D 4	E 5	79	A 1	B 2	C 3	D 4	E 5	114	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	45	A 1	B 2	C 3	D 4	E 5	80	A 1	B 2	C 3	D 4	E 5	115	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	46	A 1	B 2	C 3	D 4	E 5	81	A 1	B 2	C 3	D 4	E 5	116	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	47	A 1	B 2	C 3	D 4	E 5	82	A 1	B 2	C 3	D 4	E 5	117	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	48	A 1	B 2	C 3	D 4	E 5	83	A 1	B 2	C 3	D 4	E 5	118	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	49	A 1	B 2	C 3	D 4	E 5	84	A 1	B 2	C 3	D 4	E 5	119	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	50	A 1	B 2	C 3	D 4	E 5	85	A 1	B 2	C 3	D 4	E 5	120	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	51	A 1	B 2	C 3	D 4	E 5	86	A 1	B 2	C 3	D 4	E 5	121	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	52	A 1	B 2	C 3	D 4	E 5	87	A 1	B 2	C 3	D 4	E 5	122	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	53	A 1	B 2	C 3	D 4	E 5	88	A 1	B 2	C 3	D 4	E 5	123	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	54	A 1	B 2	C 3	D 4	E 5	89	A 1	B 2	C 3	D 4	E 5	124	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	55	A 1	B 2	C 3	D 4	E 5	90	A 1	B 2	C 3	D 4	E 5	125	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	56	A 1	B 2	C 3	D 4	E 5	91	A 1	B 2	C 3	D 4	E 5	126	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	57	A 1	B 2	C 3	D 4	E 5	92	A 1	B 2	C 3	D 4	E 5	127	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	58	A 1	B 2	C 3	D 4	E 5	93	A 1	B 2	C 3	D 4	E 5	128	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	59	A 1	B 2	C 3	D 4	E 5	94	A 1	B 2	C 3	D 4	E 5	129	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	60	A 1	B 2	C 3	D 4	E 5	95	A 1	B 2	C 3	D 4	E 5	130	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	61	A 1	B 2	C 3	D 4	E 5	96	A 1	B 2	C 3	D 4	E 5	131	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	62	A 1	B 2	C 3	D 4	E 5	97	A 1	B 2	C 3	D 4	E 5	132	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	63	A 1	B 2	C 3	D 4	E 5	98	A 1	B 2	C 3	D 4	E 5	133	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	64	A 1	B 2	C 3	D 4	E 5	99	A 1	B 2	C 3	D 4	E 5	134	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	65	A 1	B 2	C 3	D 4	E 5	100	A 1	B 2	C 3	D 4	E 5	135	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	66	A 1	B 2	C 3	D 4	E 5	101	A 1	B 2	C 3	D 4	E 5	136	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	67	A 1	B 2	C 3	D 4	E 5	102	A 1	B 2	C 3	D 4	E 5	137	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	68	A 1	B 2	C 3	D 4	E 5	103	A 1	B 2	C 3	D 4	E 5	138	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	69	A 1	B 2	C 3	D 4	E 5	104	A 1	B 2	C 3	D 4	E 5	139	A 1	B 2	C 3	D 4	E 5	
2	3	4	5	70	A 1	B 2	C 3	D 4	E 5	105	A 1	B 2	C 3	D 4	E 5	140	A 1	B 2	C 3	D 4	E 5	

2

2	3	4	5	F 6	G 7	H 8	I 9	J 10	9	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	10	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	11	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	12	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	13	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	14	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10
2	3	4	5	F 6	G 7	H 8	I 9	J 10	15	A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I 9	J 10

APPENDIX H

I/D RATIOS AND REVISED I/D RATIOS CALCULATED

BY THE ALTERNATE FORMULAS

I/D RATIO: CATS 1,2,3,4/5,6,7

REVISED I/D RATIO: CATS 1,2,3/6,7

Table H.1. Summary of the Indirect-Direct Ratios (I/D Ratios) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Classes	I/D ratios by reading group		
		High group	Average group	Low group
One	I	1.286	1.095	0.970
	II	0.278	0.206	0.173
	III	1.116	1.292	0.802
	IV	1.202	1.018	0.903
	V	0.998	0.753	0.501
Three	VI	1.025	1.554	0.676
	VII		0.655	0.842
	VIII	1.596	1.625	0.678
	IX	0.960	0.896	1.001

Table H.2. Summary of the Revised Indirect-Direct Ratios (i/d ratios) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Revised ID ratios by reading group		
		High Group	Average Group	Low Group
One	I	0.966	0.776	0.765
	II	0.392	0.177	0.217
	III	0.886	1.197	0.421
	IV	0.758	0.724	0.533
	V	0.593	0.438	0.401
Three	VI	3.667	1.799	0.485
	VII		1.743	1.022
	VIII	2.115	0.769	0.431
	IX	5.000	1.053	0.844

APPENDIX I

INTERPRETATION AND COMPARISON
OF SPECIFIC MATRIX AREAS

INTERPRETATION AND COMPARISON OF SPECIFIC MATRIX AREAS

In discussing how matrices may be interpreted and compared, Flanders and Amidon (1967a) specified several matrix areas to be considered. These areas have been outlined in detail in Appendix F and only brief references will be made to their dimensions here.

Areas A, B, C and D have already been discussed. Area A consists of the category totals for indirect teacher-talk (Categories 1, 2, 3, and 4) and Area B consists of the Category totals for direct teacher-talk (Categories 5, 6, and 7). These areas were compared in the discussion of the I/D Ratios and the Revised I/D Ratios and will be referred to briefly below as they reflect upon the interpretation of other areas. Area C consists of the category totals for the amount of pupil-talk. As these totals have been compared with the amount of teacher-talk already, Area C will not be discussed in this section. Similarly, Area D which consists of the amount of behavior recorded in the silence and confusion category (Category 10) has already been referred to in the discussion of the individual categories and will not be discussed here. The areas which have not been discussed nor compared previously are Areas E, F, G, H, I, and J and these will be the major concern in this section.

The proportions of behavior in these different areas of the matrix are reported in Table I.1 for the reading groups in the nine classes.

Area A. The percentage figures for Area A reported in Table I.1 suggest that, with the exception of Teacher II (8.4 percent), most of the grade one teachers recorded between 25 and 30 percent indirect behavior in the high groups. Teacher II was still the exception for the average groups (6.4 percent), however, the teachers were more variable (21 to 35 percent) in their behavior toward this group. In the low groups, Teacher II continued to be lower (6.1 percent) than the other teachers, all but the first grade teachers recorded less behavior in these categories for the low compared with the high groups, and with one exception, the low compared with the average groups.

In the third grade classes, the pattern is similar to the one described for the first grade classes, except that the differences between the low and average or combined group were not so clear cut. The low group was, however, characterized by far less behavior in this category than the high groups reported.

Area B. The differences between the low and the other groups in terms of the direct category totals (Table I.1) for the grade one classes show that direct behavior was greater for the low groups in all classes, reaching as high as 35.3 percent in Class II.

Table I.1. Proportions of Behavior Recorded in Specified Areas of the Matrix for Each Reading Group in the Nine Classes

C l a s s	G r o u p	Areas of the Matrix								
		E	F	G	H	I	J	A	B	C
I	H	0.5	1.8	13.3	4.5	17.7	10.4	28.3	22.0	30.9
	A	0.4	1.9	13.0	5.5	18.5	11.6	26.1	23.8	32.9
	L	0.1	4.3	12.6	5.9	18.4	4.0	28.5	29.4	25.2
II	H	0.0	2.4	5.5	7.8	14.1	14.0	8.4	30.3	38.4
	A	0.0	3.8	3.5	10.3	14.6	9.0	6.4	31.1	32.5
	L	0.1	2.5	3.4	11.0	15.1	9.3	6.1	35.3	34.0
III	H	0.4	2.2	14.5	6.6	20.6	6.7	28.2	25.3	30.0
	A	1.0	1.6	15.5	5.3	19.8	4.4	35.0	27.1	25.7
	L	0.4	5.7	9.6	6.3	15.5	6.1	24.0	29.9	23.6
IV	H	1.7	4.2	11.3	6.6	18.0	9.9	29.7	24.7	29.7
	A	1.7	3.8	11.8	8.2	19.8	6.7	28.5	27.9	28.1
	L	1.8	5.5	11.8	9.1	20.3	7.2	28.1	28.3	29.4
V	H	0.5	2.3	11.8	8.4	20.0	7.1	24.5	24.4	32.4
	A	0.4	2.3	10.3	12.0	21.7	6.4	20.6	27.3	33.0
	L	0.7	3.0	9.9	13.1	22.6	6.6	17.1	34.1	34.1
VI	H	2.0	0.8	11.5	1.2	12.7	8.6	33.6	32.8	22.1
	C	1.5	1.1	12.7	3.2	15.4	6.6	36.5	23.5	23.5
	L	1.2	7.7	8.9	6.1	14.5	10.6	21.8	32.3	29.7
VII	H									
	C	1.0	1.7	7.2	8.6	14.5	8.8	17.5	38.0	26.4
	L	0.6	0.5	9.4	7.9	16.2	8.1	20.6	22.8	27.9
VIII	H									
	A	0.6	1.6	11.6	7.2	17.7	10.5	25.8	15.9	31.2
	L	9.1	2.5	9.2	10.6	17.8	13.4	18.1	26.7	35.1
IX	H	2.3	0.1	10.7	3.1	13.5	22.2	27.8	28.9	37.2
	A	1.0	1.4	12.0	5.9	17.4	6.7	26.9	30.0	25.5
	L	0.7	3.2	13.0	6.7	19.7	4.4	27.3	27.3	26.0

For the grade three classes the group differences tended to be more teacher specific, in that the average or combined groups recorded more behavior in this area in Classes VII and IX, and less in Classes VI and VIII.

Comparison of Areas A and B. The percentages for Areas A and B are summarized in Table I.2. These figures naturally support the conclusions of the discussion of the I/D Ratios since they involve a comparison of the same behaviors. That is, low groups recorded higher proportions of direct over indirect behavior at the grade one level, but the differences were not so clear at the third grade level, when the low groups are compared with the average and combined groups.

Area E. Area E is similar to Area A except that the question category has been deleted and only the indirect motivation categories (1, 2, 3) are considered according to the build-up in the cell areas in Figure I.1.

	1	2	3
1			
2			
3			

Fig. I.1. Area E of the matrix identified

When the percentages in Area E are compared with Area A (Table I.3) it is readily apparent that questioning behavior was the predominate indirect behavior in all groups, although less so for Class II. A relatively smaller percentage of the behavior was built upon the motivation characteristics of the interaction.

Area F. Area F is defined by the build-up in the control categories of the matrix as indicated in Figure I.2.

	6	7
6		
7		

Fig. I.2. Area F of the matrix identified

Table I.2. Comparison of Matrix Areas A and B (Indirect vs Direct Teacher Talk) for the Reading Groups in the Grade One and Grade Three Classes

Grade	Classes	Percentages by reading groups					
		High		Average		Low	
		Area A	Area B	Area A	Area B	Area A	Area B
One	I	28.3	22.0	26.1	23.8	28.5	29.4
	II	8.4	30.3	6.4	31.1	6.1	35.3
	III	28.2	25.3	35.0	27.1	24.0	29.9
	IV	29.7	24.7	28.5	27.9	28.1	28.3
	V	24.5	24.4	20.6	27.3	17.1	34.1
Three	VI	33.6	32.8	(c)36.5	23.5	21.8	32.3
	VII			(c)17.5	38.0	20.6	22.8
	VIII			25.8	15.9	18.1	26.7
	IX	27.8	28.9	26.9	30.0	27.3	27.3

Table I.3. Comparison of Matrix Areas A (Indirect Behavior) and E (Indirect Behavior Less the Questioning Behavior) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Percentages by reading group					
		High		Average		Low	
		Area A	Area E	Area A	Area E	Area A	Area E
One	I	28.3	0.5	26.1	0.4	28.5	1.3
	II	8.4	0.0	6.4	0.0	6.1	0.1
	III	28.2	0.4	35.0	1.0	24.0	0.4
	IV	29.7	1.7	28.5	1.7	28.1	1.8
	V	24.4	0.5	20.6	0.4	17.1	0.7
Three	VI	33.6	2.0	36.5	1.5	21.8	1.2
	VII			17.5	1.0	20.6	0.6
	VIII			25.8	0.6	18.1	0.1
	IX	27.8	2.3	26.9	1.0	27.3	0.7

The lecturing category has been deleted, and therefore the area concentrates on the control behaviors. The build-up in these areas for the different groups suggest that the control behaviors predominated in the low groups over the other groups.

Comparison of Areas E and F. The percentages of behavior in Areas E and F are compared in Table I.4. The comparison suggests that of the first grade level the control behaviors exceeded the motivation behaviors for every group. With the exception of Class II, the build-up in the control categories was even greater compared with the motivation categories for the low groups. In grade three, the trend was similar, except in Class VII where the combined group recorded a greater build-up in the control categories over the low group.

What is suggested by this emphasis is that the control behaviors tended to be extended when compared with the motivation behaviors. Flanders indicated that a build-up in the control categories usually suggests that pupils are not complying satisfactorily. Undoubtedly, what is reflected here is the tendency for low group pupils to have trouble with their oral reading responses, a point made several times previously.

Area G. Area G concentrates upon teacher indirect responses to pupils responses and includes the categories shown in Figure I.3.

	1	2	3
8			
9			

Fig. I.3. Area G of the matrix identified

In all but Class IV, the first grade low groups received less indirect response from the teachers than the other groups (Table I.1). In the third grade classes, the low groups recorded more indirect responses in two of the four classes.

Area H. Area H concentrates upon teacher direct response to pupils' responses and comprises the matrix area shown in Figure I.4.

	5	6	7
8			
9			

Fig. I.4 Area H of the matrix identified

Table I.4. Comparison of Matrix Areas E (the Motivation Categories) and Area F (the Control Categories) for the Reading Groups in Each of the Grade One and Grade Three Classes

Grade	Class	Percentages by reading groups					
		High		Average		Low	
		Area E	Area F	Area E	Area F	Area E	Area F
One	I	0.5	1.8	0.4	1.9	1.3	4.3
	II	0.0	2.4	0.0	3.8	0.1	2.5
	III	0.4	2.2	1.0	1.6	0.4	5.7
	IV	1.7	4.2	1.7	3.8	1.8	5.5
	V	0.5	2.3	0.4	2.3	0.7	3.0
Three	VI	2.0	0.8	1.5	1.1	1.2	7.7
	VII			(c)1.0	1.7	0.6	0.5
	VIII			(c)0.6	1.6	0.1	2.5
	IX	2.3	0.1	1.0	1.4	0.7	3.2

With one exception, Class II, the low groups at the grade one level recorded a greater percentage of direct responses (Table I.1). This was also true in three of the third grade classes.

Comparing Areas G and H. The comparison of the percentages in Areas G and H are recorded in Table I.5. The respective percentages clearly indicate that in most instances the low groups not only received fewer indirect responses, but a greater proportion of direct responses.

Area I. Area I (see Figure I.5) indicates the amount of pupil responding behavior to teacher questions. The percentages suggest no differences or trends across the groups at either grade level.

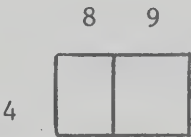


Fig. I.5. Area I of the matrix identified

Area J. Area J includes the build-up in the pupil response categories, the area outlined in Figure I.6.

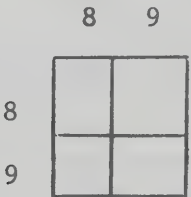


Fig. I.6. Area J of the matrix identified

The build-up in these cells (Table I.1) suggested that the high groups tended to give extended responses over the low and average groups. In Classes VI and VII, where the low group responses were more extended than those of the high group, the low groups read aloud extensively, while the high groups tended never to read aloud.

Table I.5. Comparison of the Matrix Area G (Teacher Indirect Responses to Pupil Responses) and Area H (Teacher Direct Responses to Pupil Responses) for the Reading Groups in the Grade One and Grade Three Classes

Grade	Classes	Percentages by reading groups					
		High		Average		Low	
		Area G	Area H	Area G	Area H	Area G	Area H
One	I	13.3	4.5	13.0	5.5	12.6	5.9
	II	5.5	7.8	3.5	10.3	3.4	11.0
	III	14.5	6.6	15.5	5.3	9.6	6.3
	IV	11.3	6.6	11.8	8.2	11.8	9.1
	V	11.8	8.4	10.3	12.0	9.9	13.1
Three	VI	11.5	1.2	(c) 12.7	3.2	8.9	6.1
	VII			(c) 7.2	8.6	9.4	7.9
	VIII			11.6	7.2	9.2	10.6
	IX	10.7	3.1	12.0	5.9	13.0	6.7

APPENDIX J

I/D AND REVISED I/D RATIOS FOR EACH OBSERVATION

SESSION BASED UPON THE ALTERNATE FORMULAS

I/D RATIO: CATS 1,2,3,4/5,6,7

REVISED I/D RATIO: CATS 1,2,3/6,7

Table J.1. Summary of the I/D Ratios, the Revised I/D Ratios (i/d Ratios) and the Percentages of Pupil Talk for Each of the Observation Periods by Reading Group in Each of the Classes

Class	Group	Observation 1			Observation 2			Observation 3			Observation 4		
		I/D	i/d	TT-PT	I/D	i/d	TT-PT	I/D	i/d	TT-PT	I/D	i/d	TT-PT
I	H	1.441	1.318	53-28	1.168	.578	47-29	1.256	1.368	49-39	1.161	.701	49-51
	A	1.315	.803	52-28	1.343	.959	56-34	.878	.742	43-42	.865	.662	49-27
	L	2.141	1.692	54-35	.691	.542	62-23	.646	.443	52-21	1.614	1.536	59-26
II	H	.280	.405	45-35	.251	.400	43-34	.316	.381	34-43	.236	.404	34-41
	A	.125	.094	26-40	.155	.173	37-32	.448	.364	35-45	.238	.146	36-34
	L	.182	.283	51-28	.178	.203	45-32	.150	.182	39-36	.185	.209	38-41
III	H	.787	.689	52-23	1.233	1.137	54-33	1.552	1.191	53-31	.425	.890	55-24
	A	1.293	1.725	71-20	1.095	3.501	74-19	1.223	.844	59-29	1.478	1.041	53-31
	L	.558	.259	52-23	1.491	.881	53-33	.579	.263	51-24	.859	.532	59-16
IV	H	1.618	1.641	58-26	1.264	.585	54-24	.449	.306	52-43	1.771	1.000	55-26
	A	1.208	.881	61-25	1.186	1.022	53-28	.487	.358	50-35	1.529	1.200	62-23
	L	1.684	.797	57-24	.765	.380	56-37	.811	.513	54-31	.703	.475	58-31
V	H	2.061	1.031	51-36	.989	.607	49-30	.447	.444	49-24	.774	.364	47-36
	A	.817	.412	49-33	.743	.377	45-37	.901	.468	47-30	.724	.623	48-28
	L	.543	.446	55-33	.452	.362	52-36	.494	.405	50-34	.521	.387	49-35
VI	H	One group meeting only - no comparisons possible											
	C	.736	.924	70-72	1.700	2.263	59-23	1.651	1.975	66-22	1.366	1.902	56-24
	L	.915	.475	59-24	.387	.429	53-28	.706	.351	47-38	.397	.494	50-35
VII	H	Group did not meet independently of the average group											
	C	1.523	3.185	52-39	.119	.333	50-23	.547	1.360	55-21	.065	.000	57-18
	L	1.164	1.459	38-32	.340	.625	48-17	.717	.442	43-34	.833	1.462	45-25
VIII	H	One group meeting only - no comparisons possible											
	A	1.404	.806	40-21	2.027	.779	50-33	.852	.358	37-54	1.992	.990	40-27
	L	.583	.458	47-29	.108	.150	37-41	1.261	.581	45-34	.324	.300	42-28
IX	H				1.205	.571	62-30	.940	3.636	49-47	.312	14.286	75-14
	A	1.637	1.385	49-27	1.023	1.478	68-29	.456	.427	57-26	.552	3.083	72-19
	L	.478	.842	68-20	1.210	.913	57-29	.943	.800	68-29	1.175	.825	46-25

APPENDIX K

SAMPLE COLOR-CODED PAGE REPRODUCED FROM THE
TYPEWRITTEN TRANSCRIPTS PREPARED FROM THE
AUDIO RECORDINGS SHOWING THE NUMERICAL
IDENTIFICATION OF THE EPISODES

023 { COULD YOU READ THE FIRST SENTENCE..DARRYL

(no response)

DARRYL

Sally is little but Sally can work

GOOD. WHO COULD READ THE SECOND ONE..

ALL RIGHT BETH

024 { Sally is..Sally likes to work

GOOD. WHO COULD READ THE NEXT ONE

Sally

025 { SALLY? YOU HELP HER GEORGE

See Sally work..NO THE THIRD ONE..NUMBER THREE

Sally Works and works

AND THE LAST ONE

026 { se sally THE LAST ONE DEAR

CAN YOU READ IT PLEASE

See S,ally work

I COULDN'T HEAR YOU

See Sally work..

027 { WHAT WAS SALLY DOING BILL
working

WORKING,THATS RIGHT

628 { DO YOU LIKE TO WORK CHERYL?

Sometimes I help my mum

029 { SO YOU HELP YOUR MOTHER DO YOU..GOOD

CHERYL..DO YOU LIKE TO WORK

Yes

030 { WHAT DO YOU LIKE TO DO

wash the dishes

wash... wash the dishes

APPENDIX L

DIMENSIONS OF THE FIER CATEGORIES

AND THE CATEGORIZATION PROCEDURES

(WORKING DRAFT)

DIMENSIONS OF THE FIER CATEGORIES AND THE CATEGORIZATION PROCEDURES

In this section, each of the categories of verbal behavior identified in the FIER analysis are described in detail, including any sub-categories of behavior which may have been designated. The procedures for recording the behavior on the FIER form are also set out. It should be noted that these category descriptions and the coding procedures were the ones followed in the analysis of the data using the FIER instrument in this study.

THE TEACHER SOLICITATION BEHAVIORS

Target Behavior

The target category was established to indicate how pupil respondents were brought into the interaction within the episode. The categories of target behavior are described here.

Code Target as 1 if the solicitation is open to the group but the respondent is not identified verbally.

Code Target as 2 if the solicitation is open to the group and the respondent is identified verbally.

Code Target as 3 if the respondent is identified before the solicitation has been stated.

Code Target as 4 if there is an expressed call for a respondent to volunteer a response to the solicitation.

Code Target as 5 if the solicitation is presented in a round robin fashion; round robin would involve pupils aware that they are the next respondent - although they may be identified by name as a reminder. Flash card drills are often done in a round robin although this cannot be identified. When there is doubt, Category 1 should be recorded for non-verbal designation or Category 2 for verbal designation.

Directive or Invitational Nature of the Target Behavior

The designation of the nature of the target behavior involves a value judgement, and depends upon the teachers calling for a re-

spondent by using an invitational term such as "would you like to" when the clear intention is that the pupil is expected to comply. Unless there is an unquestionable indication of the invitational language having a directive intention, the nature of the solicitation should be coded as a 1. Where a pupil is specifically "invited" the nature should be coded as a 2. (An invitational-directive statement should not be confused with a call for a volunteer--even although in reality the teacher may signify who does get to volunteer).

Content of the Solicitations

There are 12 general solicitation types specified in the FIER form. In coding the content of the solicitation, the broad solicitation category should be determined and then in the appropriate column, the number identifying the specific content of the solicitation should be recorded. In this section, each of the broad solicitation types and the specific categories of behavior identified for each are described. If there are no sub categories, a 1 should be recorded in the appropriate column to identify the general nature of the solicitation.

Questions on the written content of the reading materials (1. Reading). This category is used to identify those solicitations which involve questions which must be answered by the pupil locating information in the written content of the selection; recalling information from the written content of the selection, or interpreting information in the selection. If this category is used, the actual question should be identified according to the Guszak questioning categories. These questions are explained in detail in Appendix of this report and include the following:

- Code 1: Recognition--the respondent is called upon to locate information in the selection in order to answer the question.
- Code 2: Recall--the respondent must recall, in a literal way, information or ideas presented in the selection.
- Code 3: Translation--the respondent must present an objective, "part for part rendering" of the communication.
- Code 4: Conjecture--the respondent must make a "cognitive leap" as to what may or may not happen (an anticipatory thought not a rationale).
- Code 5: Explanation--the respondent must provide a rationale for his reasoning about the question.

Code 6: Evaluation--the respondent is expected to make a value judgement.

NOTE: THE OBSERVER SHOULD BE THOROUGHLY FAMILIAR WITH THE EXTENDED QUESTION CATEGORY DESCRIPTIONS PROVIDED IN APPENDIX BEFORE CATEGORIZING THE QUESTIONS ON THE READING CONTENT OF THE SELECTION.

Questions on the pictorial content of the selection (2. Pictures). This category is used when the questioning calls for the respondent to use the pictorial information in the selection in order to respond. This category should only be used when it is clear that the questioning pertains to the pictorial content of the selection. Questions in this category will often make direct reference to the pictorial content and when there is doubt as to the source of the information, the reading content category above should be used. The Guszak categories should be used to code the question types related to the pictorial content with the following qualifications:

Code 1: Recognition--this category is used when pupils are asked to identify objects or happenings in the picture content which are a matter of simple identification and require no interpretation. Questions in this category would include "Can you tell me who has mother's hat on?" (when it is clear in the picture that a known character has the hat on). When pupils are invited to "tell about" the picture in their own words, the Translation category (3) should be used.

(THE INVESTIGATOR SHOULD BE FAMILIAR WITH THE GUSZAK CATEGORY DESCRIPTIONS IN APPENDIX BEFORE CODING THE QUESTIONS ON THE PICTORAL CONTENT.)

Questions calling for responses based upon the pupils' fund of general information (3. Gen. Info). Pupils are sometimes invited to contribute information which will be useful in helping all pupils understand and interpret the story content. These questions are explicit in that pupils must add information to that provided in the selection not simply go beyond the information given. These kinds of questions sometimes precede the reading of the selection or may occur in the context of the reading. If the information called for is already stated in the selection being read this category should not be used, instead the question should be categorized as a Recall question in the Questions on the written or pictorial content. There are no sub-categories of this behavior, but when there is doubt, the written content solicitation or the pictorial content solicitation should be selected.

Questions calling for pupils to relate their personal experiences (4. Pers. Exp). This category should be used when pupils are asked to contribute information to the discussion which involves them relating their personal experiences. Often the personal experiences will be introduced in relation to the experiences of the characters in the story or selection. However, as the discussion is carried on these experiences may diverge radically from the original intentions. As long as pupils are asked to talk about their personal experiences this category should be used, even if the questions call for an evaluation of those experiences. If the evaluation reflects directly upon the characters in the selection, then one of the categories for ?? on reading should be used. There are no sub-categories for this solicitation type.

Silent reading solicitations (5. Silent Read). This category should be used if pupils are asked to read a passage silently for the purpose of becoming familiar with the content. If they are asked to read silently to answer a specific question, this category should be used, then the recall category from the written content solicitation should be used, (or the recognition category) when the oral response is specifically called for in the later solicitation. If pupils call out responses without being directed to respond, the recall question should be recorded as a matter of convention if the teacher accepts the called out response. This would then identify a new episode. The following sub-categories should be used to identify the silent reading solicitations:

Code 1: Read only - respondents are simply directed to read.

Code 2: A Guiding question - respondents are directed to read silently to answer specific questions posed.

Code 3: "Read what was said" - respondents are directed to read in such a way that they can expect to be questioned on the content. This category should be designated regardless of the specific terminology used by the teacher.

Oral reading solicitations (6. Oral Read). If pupils are directed to read orally without expressly being asked to read aloud a passage which answers a question on the written content, the solicitation should be identified as an oral reading solicitation and identified as:

Code 1: Read only - a simple directive to read.

Code 2: Expression stressed - how the person would really say it.

Code 3: "Read what was said."

Code 4: Dramatization or Audience situation - this category should not be used except where the other pupils are actually being an audience or if the children are specifically dramatizing the story.

Code 5: Other - if none of the above categories apply use a category 5.

Word attack skills (7. Word attack). This category should be used except for instances of sight vocabulary drill and the meaning of words in isolation. The areas of word attack to be sub-categorized include the following:

- Code 1: Sound-symbol translation--use this category when the pupil is expected to respond by giving the sound of a symbol or giving the symbol for a sound, exclusive of a syllable or word.
- Code 2: Apply a phonics principle--use this category when the pupil is asked specifically to use his knowledge of phonics principles to work out an unknown word.
- Code 3: State a phonics principle--use this category when the pupil is asked to state a phonics principle such as the prescribed role of the "silent 'e'" or "when two vowels go walking...."
- Code 4: Structural analysis--making the sound-symbol translation for a syllable or other word part (such as one part of a compound word).
- Code 5: Structural analysis--identification of a word part meaning unit such as "un", "er" or "per."
- Code 6: Structural analysis--application of a principle--use this category when the solicitation requires that a specific or general structural analysis principle be applied in pronouncing or giving the meaning for a word.
- Code 7: Structural analysis--statement of a structural analysis principle--use when pupils are expected to state the principle, such as "what happens to a verb under most conditions where an "er" is added."

- Code 8: Spelling--where words are spelled (for whatever reason in the lesson), or where the teacher explicitly asks for a word or word part to be spelled.
- Code 9: Alphabetizing--use this category when alphabetizing practices are such as putting words in alphabetical order or identifying objects by their letter names.
- Code 10: Other--any solicitation which does not fall logically within the categories cited above should be classified as "other." A record should be kept indicating the nature of these solicitations in order that they may be examined in detail to determine changes in the categories identified in the initial instrument.

Locational skill directives (8. Loc. Skill). This category should be used to indicate solicitations which are aimed at pupils finding appropriate sections of the reading materials (pages, etc.) or using the table of contents to locate story selections. Use of the index or a glossary would also be designated here, as would directives to look at graphs, charts and other pictorial materials. If a specific question is given that falls logically in the written or pictorial content categories then the appropriate category for either of those two solicitations should be used.

Word Knowledge Solicitations (9. Word Know.). This category is used when word pronunciation and word meanings are stressed in isolation from the story context and none of the specific word analysis skills are suggested in the solicitations. Flash card drills, where pupils are expected to make rapid word responses would fall in this category. While the presentation of the word would not necessarily involve a verbal directive from the teacher, each card flashed to a pupil should be identified as a specific solicitation as a matter of convention and identified on the record form with the responses analyzed. There are four categories of word knowledge solicitations, including:

- Code 1: straight pronunciation of the word or phrase of less than 3 words in isolation.
- Code 2: giving the meaning of the word in isolation.
- Code 3: either 1 or 2 but where the solicitation involves a context clue provided by the teacher.
- Code 4: a directive "to use the word" - either where the intention is to determine whether the pupil can pronounce the word, knows its meaning or both.

Using exercise materials as a lesson base (10. Cont. ex.). If the lesson is based upon the use or completion of controlled exercises for the development of specific skills, then this category should be used whether the source is the workbook, exercise sheets, or black-board exercises. The specific types of behaviors to be identified include:

- Code 1: Straight reading of the exercise material aloud;
- Code 2: Completion of the required response, whether stated in pupil's own words or read aloud in sequence;
- Code 3: Questions on the materials to be used--often involves teacher questions to be certain that the content of the exercise is understood (e.g., identify each picture);
- Code 4: Questions to determine whether the pupil understands how to complete the tasks asked in the exercise;
- Code 5: Checking of work completed.

Non-verbal responses (11. Non-verbal). Use this category if audio-tapes are being used and the specific solicitation calls for a non-verbal response which cannot be analyzed. If the response can be determined then use one of the other categories where appropriate.

Other solicitations (12. Other). Use this category when the solicitation in reading does not fit logically with the solicitation types identified above. If there are a series of these types of solicitations, an anecdotal record describing their nature should be kept.

PUPIL RESPONSE CATEGORIES

Failure to Respond

If the pupil fails to respond, his failure should be recorded as:

- Code 1: where there is no audible response indicating inability to respond.
- Code 2: where there is audible response such as "I can't" or "I don't know."
- Code 3: where the pupil asks teacher for more information.

Unison Responses

If one or more pupils respond to the solicitation in unison, the response should be categorized as a unison response, even if pupils are reading aloud in unison. The teacher need not specify a unison response in the solicitation, but the unison response should be coded where it appears.

Complying Responses

A response is identified as a complying response even if after failure, the pupil, at the prompting of the teacher makes an overt effort to comply with the original solicitation. (There is an appropriate space on the form to indicate that the pupil complies after initial failure. The box should be checked where this behavior is evident.)

The complying responses must first be identified by four general areas -

- a word level reading response - one word read aloud or a phrase of 3 words or less
- an oral reading response - where more than 3 words are read as the passage sequence
- an open response where pupils respond in their own words.

These categories are not recorded, since they will be indicated by the specific category designations below.

Identifying the Passage in The Selection. Where an oral reading response is called for, pupils may be unable to identify the passage read. If this happens, the figure 2 beside the "identifies passage" on the FIER form should be circled. If the passage is identified, the 1 should be circled.

Oral Reading Miscues (Word level or longer). If there are no miscues in the oral reading response (word level or longer) then this will be indicated by the fact that no miscues are recorded. Each miscue in one oral reading passage to a maximum of ten for each passage are recorded. The miscue categories are

- Category 1: Hesitations--if the pupil hesitates as indicated by a break in his pattern of reading that does not fit the normal requirements for breathing or the punctuation, then a hesitation miscue is recorded. There is no way of timing the

hesitation and therefore the judgement of a hesitation must be subjective. The rule of thumb in identifying the hesitation miscue is that there is a definite time lapse not usual in that pupil's reading pattern. If the pupil tends to read in a word by word manner, the pause between words should not be recorded as a hesitation.

- Category 2: Mispronunciations--if a pupil mispronounces a word in his attempt to analyze the word or because he is unsure of just how the word is pronounced, then this category should be used. If there is any indication that the mispronunciation may be due to a dialectical difference, a miscue should not be recorded. Only the first mispronunciation of a given word is recorded in a given passage read.
- Category 3: Substitutions (Linguistic)--this category is used to identify those substitutions which may be linguistically correct in that the syntax of the passage is not shifted by the substitution.
- Category 4: Substitutions (Semantic)--this category is used when the substitution of a word does not disturb the meaning of the passage.
- Category 5: Substitutions (Other)--if the substituted word is incongruous with the syntax and the meaning of the passage, then it is identified by this category.
- Category 6: Omissions--if a word or phrase is omitted in the reading of the passage, it is categorized as an omission.
- Category 7: Additions--if a word is omitted in the reading of the passage, it is categorized as an addition.
- Category 8: Regressions--if a pupil rereads words or phrases before continuing with the reading of the selection, it is recorded as a regression.
- Category 9: Phrasing--if the punctuation or normal syntactic patterns are disturbed by run-on reading-phrasing miscues should be recorded.

- Note 1: *If a pupil reads aloud in a word by word manner, this should be noted in the appropriate place on the FIER form.*
- Note 2: *The length of the passage read, where the length exceeds 3 words, should be indicated by the number of words in the passage in the appropriate place on the FIER record form.*
- Note 3: *The total number of errors should be added and indicated as number of hesitations and number of overt miscues in the appropriate place for number of miscues on the FIER record form.*
- Note 4: *If the pupil self-corrects his miscue this should be indicated in the row identified as correction-self for the appropriate miscue by a check ✓ mark.*
- Note 5: *If the pupil is corrected by another pupil this should be indicated in the row identified as correction-pupil for the appropriate miscue by a check ✓ mark.*
- Note 6: *If the miscues go uncorrected, the appropriate space in the row marked correction-none should be checked ✓ .*
- Note 7: *If the teacher reacts correctively to a miscue, the nature of the correction reaction will be specified as indicated below under Teacher Reactions-Corrective (Oral Reading).*

Categories of Pupils Open Responses. If the pupil responds to the teacher solicitation by answering in his own words, the response is categorized in terms of its correctness in relation to the solicitation, with the exception of yes-no responses which are simply identified as such because of their brevity. The categories for identifying pupil open responses are:

- Category 1: Yes-no response.
- Category 2: Correct--if the solicitation calls for a factual type response which can be predicted, the response is categorized as correct, if it is correct in relation to the solicitation.
- Category 3: Incorrect--if the situation calls for a factual type response which can be predicted, the response is categorized as incorrect, if it is incorrect in relation to the solicitation.

- Category 4: Congruent--if the solicitation may be responded to with a number of different responses, then if the response meets the intention of the situation it is identified as congruent.
- Category 5: Incongruent--if the solicitation may be responded to with a number of different responses, then if the response given does not meet the intention of the situation it is identified as incongruent.
- Category 6: Tangential--if the situation may be responded to with a number of different responses, then if the response is tangential to the situation, that is, it is not quite in line with the intention of the solicitation, but is not incorrect as such, the response should be identified as tangential.
- Category 7: Incomplete--if the pupil begins to respond to the solicitation but he is unable to complete the required response, it should be identified as incomplete.
- Category 8: Incomprehensible--if the response simply cannot be understood in order to determine its acceptability it should be identified as incomprehensible.
- Category 9: No response--this category should be used to designate those instances where the pupil does not respond when the teacher has reacted to his response correctively or with an attempt to get him to extend his response.
- Category 10: Other--this category should be used when none of the other categories apply to the response. Where this category is used extensively, a note should be made specifying the behaviors under consideration.
- Note 1: *If the pupil self corrects his open response without prompting from the teacher, this should be noted by a check mark ✓ in the appropriate space on the FIER form. (Correction-Self)*
- Note 2: *If another pupil corrects the respondent or indicates that the respondent's answer is not acceptable, this should be indicated by a check mark ✓ in the appropriate place on the FIER form. (Correction-Pupil)*

Note 3: *If the teacher reacts correctively to the pupil's open response this will be indicated by the specific nature of the corrective reaction being identified by the categories described under teacher open corrective reactions.*

TEACHER REACTIONS TO PUPIL RESPONSES

Teacher reactions are identified in the FIER as corrective reactions to oral reading responses (one word or more) and to open reading responses, and as confirming reactions. While there are two different sets of behavior categories for the corrective reactions of teachers, there is only one set of confirming behaviors identified. The coding form is set up, however, so that the confirming reactions may be identified in relation to the specific general nature of the pupil response. If the confirming behavior is a reaction to the oral reading behavior, the left hand side of the form is used and if a pupil open response is involved, the right hand side of the form is used. By providing a number of columns for both the corrective and confirming behaviors, a number of factors involved in a pupil response may be accounted for, such as a number of miscues or the reciprocal responses of pupils to teachers reactions and so on.

The Corrective Responses to Oral Reading Responses

In responding to an oral reading miscue, the teacher might react with several different verbal behaviors almost simultaneously. Yet, that same teacher, or another teacher might react with only one of the confirming reaction statements. To allow for this contingency, each segment of the total reaction which could be identified by a category is thus identified and categorized by sequencing the statements according to the categories that describe the behavior. That is, the verbal pattern observed might be

No, look at the vowel sound,--you are not paying attention today or you would not have made that mistake...

On the record form, the "No" would be recorded as a Denial and indicated by a 1 in the appropriate column beside the Denial category (12). The "look at the vowel sound" would be recorded as a directive to apply a specific word analysis skill, and would be indicated by a 2 in the appropriate column beside the "App. Spec. W.A." category (5). The "you are not paying attention today or you would not have made that mistake" would be recorded as a reprimand and would be indicated by a 3 in the appropriate column beside the Reprimand category (6). In other words, by examining the numerical identifications in any single column, the teacher reaction as a sequence of verbal behavior can be identified

as Category 12-2-5 or Denial-Specific Word Analysis-Reprimand.

The specific Corrective reactions to oral reading miscues are:

- Category 1: *No ne*--this category was designated but is unnecessary in view of the record of no correction in the response category section.
- Category 2: *T. Ans. (Teacher answers)*--this category is used when the teacher actually gives the correct response when an overt miscue is recorded or provides the next word in sequence when a hesitation is recorded. If the teacher reads a phrase or short passage to indicate how it should be read, this category would be used.
- Category 3: *Ind. Miscue (Indicates miscue)*--this category is used when the teacher draws the respondent's attention to a miscue, (by any other means than a denial statement--such as no) and would include such phrases as "are you sure that's right", "watch it now" and so on.
- Category 4: *Apply gen. W.A. (Apply general word analysis skill)*--this category is used when the teacher indicates to the pupil that he should draw upon his knowledge of word analysis skills and try to work out the word independently. Such phrases as "look at the ending" and "try your sounds" would apply here.
- Category 5: *Apply Spec. W.A. (Apply specific word analysis skills)*--this category differs from Category 4 in that the pupil is specifically told what word analysis skill to use. That is, instead of saying "use your sounds" the teacher says "sound the first letter" or "what does the first syllable say".
- Category 6: *Reprimand*--this category is used when the pupil is chastized for his general behavior, as that behavior may have caused the miscue. Such statements as "you weren't listening or you would know that word" or "if you worked harder..." etcetera, would be categorized here.
- Category 7: *Reread*--this category is only used if the pupil is told specifically to reread part of all of a passage in order to read it correctly.
- Category 8: *Punctuate (Punctuation)*--this category is used if the teacher draws the pupil's attention to the punctuation as this may reflect upon a phrasing problem or word by word reading.

- Category 9: *Directive*--this category is used for such reactions as "look at it", "put your finger under the word" which are directive in nature but which are not explicit directives to reread or to perform any of the other responses indicated above.
- Category 10: *Group*--if the teacher asks the group or a member of the group to "help" out, then that behavior is recorded under "group".
- Category 11: *Pass on*--if the teacher stops the pupil in mid-reading or when a miscue has been noted, and asks another pupil to carry on, then the category is used.
- Category 12: *Denial* --the denial category is used only for the word "no" or a derivative such as "unh unh" when "no" is meant to indicate that a miscue has been made and that the pupil should correct himself.
- Category 13: *Other*--this category is used when the reaction statement does not fall logically within any of the other categories. If many reactions are recorded as "other" then a note should be made to explain their special characteristics.

The Corrective Reactions to Pupil Open Responses

The open corrective reactions are recorded in the same way as the (oral) corrective reactions in that each segment of the verbal reaction pattern is identified and categorized, numerically, in sequence, according to the categories identified in the FIER instrument. The (open) corrective categories are:

- Category 1: *None*--this category is used when a pupil's response to a corrective reaction from the teacher is still not acceptable but the teacher does not react to the response correctively.
- Category 2: *Denial*--this category is used whenever the teacher reacts with a statement which simply denies the acceptability of the response. The most used verbal behavior would be a "no" or "that's not right".
- Category 3: *Directive*--a teacher reaction is categorized as a directive when the teacher directs the pupil to do something, such as "look at a certain paragraph" or "picture" in order to correct his response.

- Category 4: *Repeat? (Repetition of the Solicitation)*--if the teacher reacts correctively by repeating the solicitation, that reaction is categorized here.
- Category 5: *Repeat (Repetition)*--if the teacher asks the pupil to repeat his response, this category is used.
- Category 6: *Add. Info. (Additional information requested)*--if the incomplete response is met by a reaction asking for more information, this category is used.
- Category 7: *Exp. error (Explains error)*--if the teacher attempts to explain just why the response is not acceptable, this category is used.
- Category 8: *Yes, but*--if the response is accepted but then treated as an unacceptable response this behavior should be indicated here.
- Category 9: *Self. Correc. (self correction)*--if the response of the teacher explicitly directs the pupil to correct his own response (not just an indication of its unacceptability) then this category should be used.
- Category 10: *Reprimand*--if the teacher criticizes the pupil's deportment or general attention to improving his reading, this category should be used.
- Category 11: *Group*--this category is used when the teacher asks the group or a member of the group to "help". Since help is often in the form of the answer, the pass on category may follow if the pupil does not respond after the "help" has been given.
- Category 12: *Pass on*--if another pupil (or the group) actually takes over the solicitation then the pass on category should be identified so that it will be known that while the pupil attempted to comply, he was not successful in completing an acceptable response.
- Category 13: *Other*--this category should be used when the observed verbal reaction does not logically fit any of the categories identified. If many reaction behaviors are categorized as "other" a note should be made to explain their specific characteristics.

The Confirming Reactions

The confirming reactions are recorded in the same manner as the corrective reactions in that the behavioral response is categorized by segments according to the categories identified and the sequence is maintained by sequencing the numerical identifications in the appropriate columns. The confirming reaction categories are:

- Category 1: *None*--if there is no confirmation of the acceptability of the response, this category is marked with a check ✓.
- Category 2: *Min. Confirm (Minimum confirmation)*--minimum confirmation statements indicate that the response is acceptable by a simple statement such as "yes" "uh huh" or "ok".
- Category 3: *Min. Praise (minimum praise)*--minimum praise statements indicate that the response is acceptable but there is some praise indicated by "good", "I like that answer", "fine", and "very good".
- Category 4: *Repeats response*--a response may be repeated verbatim by the teacher as an indication of its acceptability. In this instance, one could say that since the response was right or acceptable the teacher wants to be certain that all members of the group heard it.
- Category 5: *Enc. extension (Encouragement of an extended response)*--sometimes having indicated the acceptability of the response, the teacher goes on to encourage the pupil to add to his response, to extend it as it were. If this behavior is observed, it should be recorded here.
- Category 6: *Expands on idea*--in this instance, the teacher expands upon the acceptable response, in the sense of adding information to the response.
- Category 7: *Group praise*--in some instances, the teacher asks the group to praise or confirm the acceptability of the response.
- Category 8: *Invite other*--not the group, but a specific pupil is asked to praise the response or to indicate its acceptability.

Category 9: *Adds explain. (Adds explanation)*--if the teacher feels that the group may not appreciate the acceptability of the response, she will sometimes try to explain to the group why the response is a good one, or an acceptable one. In some cases, the response is reworded for the group.

Category 10: *Accepting*--there are instances when the above categories do not explicitly characterize the teacher's reaction, yet by her reaction there is a clear understanding that the response has been accepted, and may even serve as the basis for further discussion. To some considerable extent, this accepting behavior is very close to that described by Flanders as Category 3 behavior, where the pupil response is not praised but simply acceptable and is then used to promote further group discussion.

Category 11: *Other*--this category is used when the teacher's reaction does not logically fit the above categories. If this category is designated to any extent, a note should be made to show the special characteristics of the reaction.

Note 1: There are no extending teacher reactions specifically recorded in the FIER category system. If the extending categories are to be examined, the "add info" or category 6 of the corrective reactions to open responses, and the "Enc. extension" or category 5 of the confirming reactions should be examined separately. Taken together, both categories of behavior, while for different purposes, do call for a pupil to extend his response.

APPENDIX M

SAMPLE EPISODES DRAWN FROM THE VERBATIM
TRANSCRIPTS OF THE READING CLASSES

WHAT PAGE IS IT ON?

ah..35..55..

it's 55

35..3 and 5

IT'S 35 PAGE 35

WHAT DOES FRISKY MEAN BILLY?

it ah..playful

I know

PLAYFUL...THAT'S RIGHT

MIKE WHAT WORD DID YOU CIRCLE?

no response !!!!!!!!!!!

WHAT WORD DID YOU CIRCLE..JOE.

no response..

DO YOU REMEMBER WHAT WORD YOU CIRCLED? IT BEGINS WITH
WHAT LETTER?

c..

C. WHAT WORD IS THAT..DO YOU REMEMBER?

DO YOU REMEMBER THAT WORD?

SEE IF YOU CAN FIND AND THAT'S...ANNA TOLD YOU THIS ONE.

WOULD YOU LIKE TO TELL HIM AGAIN ANNA..

HOW DO YOU THINK DICK PUT IT UP THERE?

because he could climb up..

WHAT DO YOU THINK ABOUT DICK'S TRICK NOW? WAS IT A FUNNY
TRICK OR WAS IT A BAD TRICK TO PLAY...

a funny trick...

ALL RIGHT..WHY BILL..

because..

BILL DOESN'T THINK IT WAS A BAD TRICK JUST A FUNNY TRICK...NOW..

FIRST OF ALL...

he was just teasing them playing...

WAS THERE ANY HARM DONE...

no

....NO THERE WASN'T...OH WHAT DO WE COME TO...

his birthday..

WHO

Pete

PETE'S BIRTHDAY TOMORROW. NOW SANDRA....YOU ASKED FOR THEY

DEAR....JANET...AH...TIM...AND GARY

NOW...WHY DOES JANE LOOK SO SURPRISED?

...because the cat's missing

IT'S DISAPPEARED...HASN'T IT...WHAT DOES SHE SAY..MOLLY?

WHEN SHE SEES.

NOW..HOW MANY BALLOONS IS SUSAN GOING TO HAVE TOM?

three

LOOK AT THE PICTURE ON PAGE 93...WHAT IS SHE DOING..WHY?

SHE'S DOING MORE THAN THAT...

tying them on her dress...

YES..AH..BUT BEFORE WHAT JANE SAW WHAT SHE WAS DOING..LOOK

AT THIS TOP PART AGAIN..WHAT DID JANE THINK SHE WOULD HAVE

TO DO?...TOM..WOULD YOU BE ABLE TO ANSWER?...JANE THOUGHT

SHE HAD TO DO SOMETHING...

to help...

ANN

to help Susan get in...

THAT'S RIGHT..WOULD YOU

PEGGY?

little..

THE GIRL

JIM

Sally said..Dick works and Jane works...

GOOD

LET'S HEAR BETTY AND MOTHER TALKING....

Come Betty...

JUST A MINUTE...DID YOU READ EVERYTHING THAT MOTHER SAID?

DO YOU REMEMBER I WAS TALKING ABOUT THE LITTLE FENCES THERE

AROUND THE WORDS THAT PEOPLE SAY...WELL YOU TELL US

EVERYTHING THAT MOTHER SAYS...

ahm..come Betty...

GO ON..

put on your..put on your red dress. dress now then you may go
to the store for me

VERY GOOD..BUT COULD YOU MAKE IT SOUND MORE LIKE MOTHER NOW..

YOU'RE MOTHER NOW..YOU'RE NOT SARAH..

my red..

OH WAIT..WE ARE GOING TO HAVE MOTHER TALK TO YOU AGAIN....

Come Betty..put on your red dress then

WHEN DOES SHE WANT HER TO PUT ON THE RED DRESS?

put on your red dress now..

WELL YOU BETTER READ THAT LINE AGAIN..THAT DIDN'T SOUND LIKE
MOTHER THE FIRST ONE DID....

Put on your..put on...your red dress now..

YES YOU'RE ALWAYS FORGETTING THAT NOW..

I THINK YOU CAN DO THE WHOLE THING REAL NICELY..COME ON MOTHER

Come Betty..put on your red dress now..

COULD YOU SAY THAT OUT WITHOUT STOPPING BETWEEN DRESS AND NOW.

AND WHAT IS THE LAST PICTURE GRACE?

an egg..

AN EGG...JUST A BIG ROUND EGG ALL IN THE SHELL....

Bump bump bump

here..(no this..)

NO PAGE..YOU SHOULD BE ON PAGE 83...

THERE IS A MAGIC HORSE...

There is a magic horse...

STAND UP I CAN HARDLY HEAR YOU..

There is a magic horse..said the little green man..

SAMMY?

Jack called help me down.

I do not like to ride (this..this) this bunny.

My (he) he jumped (and) and bumped.

My (may) may I come down.

Yes said the little green man. Down you come. I will
make you big again..

OK

VERY GOOD NOW..READ WHAT BETTY SAID TO YOURSELVES..FIRST..

AND THEN WE'RE GOING TO MAKE IT SOUND JUST LIKE BETTY WAS
SAYING IT..

(all reading aloud..)

!!!!!!!!!!!!

APPENDIX N

SUPPLEMENTARY FIER FINDINGS

APPENDIX N

In this appendix supplementary FIER findings are presented in 7 parts.

PART 1: EPISODES FOR LESSON TYPES

The number of episodes for each lesson are recorded in Table N.1.

PART 2: IDENTIFYING THE PUPIL RESPONDENT

The episode involved the teacher interacting with one pupil in the group at a time, except for the unison responses. Since the episode was initiated in a group context, a question explored in the FIER analysis was how did the teacher identify the respondent. In developing the FIER system, several categories of behavior were identified, including:

(1) Opening the solicitation to the group and allowing a pupil to respond, possibly through a non-verbal gesture;

(2) Opening the solicitation to the group and indicating the respondent verbally;

(3) Specifying the respondent prior to stating the solicitation;

(4) Calling for a volunteer to respond to the solicitation;

(5) Round-robin response patterns where pupils would respond in turn according to some pattern such as around the table, or by numbering off.

The frequencies and percentages of these behaviors in the reading groups are summarized in Table N.2. for the two grade levels. The most usual behavior used in identifying the pupil respondent was to open the solicitation to

Table N.1. Frequencies and Percentages of the Episodes Recorded for the Different Types of Lessons for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Seatwork underway	Preparation word level		Preparation background		Guided reading	Listening lesson	?? on story content		Controlled exercises	Related lang. activity		Types of lessons		Totals		
			f	%	f	%			f	%		f	%	f	%		f	%
One	H	42	5	351	39		437	48	4	0	26	3		16	2	33	4	909
	A	40	5	366	47	28	4	284	37							21	3	775
	L	37	4	281	34			264	32	5	1	153	18	62	7	29	3	836
Three	H	26	7	81	22			92	25									105
	A	5	2	78	32	6	2	78	32	45	12	10	3	94	25	7	3	374
	*C	8	2	157	28	17	3	91	38	18	7	37	15	115	21	6	2	242
	L							149	27	37	7	11	2			11	2	550
Total	grade one	119	5	998	40	28	1	985	39	9	0	31	1	78	3	36	1	2520
Total	grade three	39	3	238	19	101	8	332	26	66	5	100	8	209	16	18	1	1271
	Total sample	158	4	1236	32	129	3	1317	35	75	2	131	3	287	8	54	1	3791

* Combined high-average group

Table N.2. Frequencies and Percentages of the Different Procedural Behaviors Used by Teachers to Identify Pupil Respondents for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Procedures for identifying pupil respondents										Totals
		Open to group f	%	Open to group -pupil identified verbally f	%	Respondent identified in solicitation f	%	Call for volunteer f	%	Round robin f	%	
One	HAL	372	41	99	11	356	39	37	4	47	5	911
		247	32	103	13	336	43	35	4	54	7	775
		279	33	102	12	341	41	62	7	52	6	836
Three	HAC* L	51	49	27	26	24	23	3	3			105
		93	25	94	25	176	47	5	1	6	2	374
		101	42	65	27	69	28	7	3			242
		198	36	101	18	173	31	15	3	63	11	550
Total	grade one	898	36	304	12	1033	41	134	5	153	6	2522
Total	grade three	443	35	287	23	442	35	30	2	69	5	1271
Total	sample	1341	35	591	16	1475	39	164	4	222	6	3793

* Combined high-average group

the group and then to identify the pupil respondent, either verbally or non-verbally. In some instances, pupils would have responded without being identified, but this could not be determined from the audio-tapes. While pupils were sometimes identified before the solicitation was stated, the recommended practice of stating the solicitation prior to indicating which pupil was to answer was more often the practice.

One hears criticisms levelled at reading classes on the basis that pupils simply read in turn on a round-robin basis. That is, children respond, one after another, according to some predetermined pattern, such as up and down the rows or around the reading table. However, despite that generally held impression, very few solicitations in these classes were introduced that way. The class data (Table N.3.) shows that only Teacher V used this behavior with any regularity, and even in the case of that teacher, the anecdotal record showed that the pattern was followed mainly for flash-card exercises at the beginning of the lesson.

While it was not a crucial issue, the FIER also allowed for the identification of the nature of the teacher's language in introducing the solicitation. Rabin (1959) had suggested that many teachers, like many parents, tended to use non-directive language for directive purposes. He stated that teachers used such phrases as "would you like to," when they had no intention of entertaining a negative response. This criticism fits the stereotype of the primary teacher as "a dear soul" working patiently with little children and treating them in a saccharine manner. To determine whether or not this criticism was just, each of the solicitations was identified in terms of the directive or non-directive quality of the teacher's language. The results of the analysis are reported in Table N.4 and show that the teachers in the sample, generally, did not behave in a non-directive manner. While the behavior is recorded, the breakdown for the individual classes in Table N.5 suggests that it was Teacher I who used the greatest proportion of the non-directive language recorded, and she hardly over-used it. Apparently the teachers in this sample share one other characteristic in common--they do not fit the stereotype of the primary teacher.

Table N.3. Frequencies and Percentages of the Different Procedural Behaviors Used by Teachers in Identifying Pupil Respondents for Each of the Reading Groups in the Nine Classes

C l a s s	G r o u p	Open to group (no verbal id.)		Open to group (verbal id.)		Closed (respondent named)		Volunteer asked		Round robin		Other		Totals
		f	%	f	%	f	%	f	%	f	%	f	%	
I	H A L	151	51	27	9	103	35	13	4	2	1			296
		81	45	19	11	68	38	11	6					179
		100	44	25	11	93	41	8	3					226
II	H A L	39	51			38	49							77
		20	40	4	8	26	52							50
		13	35	1	3	23	62							37
III	H A L	84	39	42	20	73	34	1	1	13	6			213
		52	39	36	27	42	32	2	2					132
		49	33	42	28	57	38							148
IV	H A L	13	19	9	13	37	54	9	13					68
		20	25	17	21	32	40	10	13			3	2	79
		38	30	16	13	47	37	23	18					127
V	H A L	85	33	21	8	105	41	14	5	32	12			237
		74	22	27	8	168	50	12	4	54	16			335
		79	26	18	6	118	40	31	10	52	17			298
VI	H *C L	98	44	63	28	53	24	7	4					221
		39	56	14	20	16	23							69
VII	H *C L	2	9	2	9	16	76					1	5	21
		16	20	12	15	34	43	5	6	12	15			79
VIII	H A L	29	44	17	26	20	30							66
		59	22	65	24	140	52	2	1			2	1	268
		21	24	21	24	32	37			12	14			86
IX	H A L	21	54	10	26	4	10	3	8			1	3	39
		32	30	29	27	36	34	3	3	6	6			106
		122	38	54	17	91	29	10	3	39	12			316

* Combined high-average group

Table N.4. Frequencies and Percentages of Teacher Directive and Non-directive Verbal Behavior in Identifying Pupil Respondents for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Identifying pupil respondents				
		Directive		Non-directive		Total
		f	%	f	%	
One	H	881	97	30	3	911
	A	746	96	29	4	775
	L	822	98	14	2	836
Three	H	103	98	2	2	105
	A	371	99	3	1	374
	*C	240	99	2	0	242
	L	548	100	2	0	550
Total grade one		2449	97	73	3	2522
Total grade three		1262	99	9	1	1271
Total sample		3711	98	82	2	3793

* Combined high-average group

Table N.5. Frequencies and Percentages of Teacher Directive and Non-directive Verbal Behavior in Identifying Pupil Respondents for Each of the Reading Groups in the Nine Classes

Class	Group	Verbal behavior in identifying pupil respondents				
		Directive		Non-directive		Totals
		f	%	f	%	
I	H	272	92	24	8	296
	A	157	88	22	12	179
	L	214	95	12	5	226
II	H	76	99	1	1	77
	A	46	92	4	8	50
	L	37	100			37
III	H	213	100			213
	A	132	100			132
	L	148	100			148
IV	H	67	99	1	1	68
	A	79	100			79
	L	127	100			127
V	H	253	98	4	2	257
	A	332	99	3	1	335
	L	296	99	2	1	298
VI	H					
	*C	220	99	1	1	221
	L	69	100			69
VII	H					
	*C	21	100			21
	L	78	99	1	1	79
VIII	H	66	100			66
	A	267	100	1		268
	L	86	100			86
IX	H	37	95	2	5	39
	A	104	98	2	2	106
	L	315	100	1		316

* Combined high-average group

PART 3: PUPIL UNISON BEHAVIORS AND TEACHER REACTIONS

Unison responses were roughly categorized as oral reading and non-oral reading responses in the analysis. Oral reading unison responses were categorized further as word level (3 words or less) and oral reading responses. The non-oral reading responses were categorized as yes or no, and open responses. The category "other" included the non-verbal responses (e.g., silent reading and locating information) or, lost data.

The unison responses of the reading groups by grade level are summarized in Table N.6. Unison responses involving pupils reading aloud were recorded more often in the grade one classes (41 percent) than in the grade three classes (15 percent), and, conversely, non-oral reading responses accounted for 67 percent of the unison responses at the third grade and only 47 percent of the first grade responses.

The shorter oral reading responses (word level) accounted for the largest percentage of oral reading responses in all groups at the grade one level, while few of these responses were recorded for the third grade groups. The proportions of yes-no and open responses were more equal (48 and 52 percent, respectively) in the first grade groups compared with the third grade groups, where the yes-no responses were recorded more often.

In examining the different reading groups, the record suggests that grade one high groups made a greater percentage of unison responses and reading responses accounted for 49 percent of those recorded. The low group made only 32 percent reading responses. Since these groups were equal at the non-reading level (45 percent each), more of the low group responses were recorded as "other," suggesting that as a group they engaged in more group non-verbal behavior.

Average grade threes made more unison responses than the low groups in the reading category. Reflecting on the similar situation described for the grade one pupils, one could speculate that unison oral reading responses were more acceptable, generally, from high reading groups compared to low reading groups, possibly because teachers, concerned about the problems of the low group, felt that the oral reading responses of each pupil should be heard on its own. A suggestion was made above that unison re-

Table N.6. Frequencies and Percentages of the Different Types of Unison Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Categories of unison responses												Totals			
		Oral reading				Non-reading				Other unison responses							
		Word level	Phrase plus	Total react		Yes-no	Open	non-reading	Total	f	% of total	f	% of total				
One	H A L	85	79	23	21	108	49	50	53	49	47	99	45	15	7	222	
		48	73	18	27	66	39	45	56	42	44	87	52	16	9	169	
		43	74	15	26	58	32	33	41	47	59	80	45	41	23	179	
Three	H A L	10	71	4	29	14	33	4	67	2	33	6	86	1	14	7	
				3	100	3	5	6	30	14	70	20	61	2	6	36	
		5	4	6	5	11	19	27	79	7	21	34	58	11	17	62	
Total	grade one	176	76	56	24	232	41	128	48	139	52	266	47	72	13	571	
		15	60	10	40	25	15	69	64	40	36	108	67	28	17	164	
Total	sample	191	74	66	26	257	35	197	53	179	47	374	51	100	14	735	

* Combined high-average group

sponses characterized the high groups more because the group was larger, and the unison response allowed for more active participation of individual group members in the time allowed. Whatever the reason, if the individual must respond on his own, then his response is more easily reacted to by the teacher. This would mean that low group pupils would be more likely to be corrected, compared to high group pupils, who could hide behind the group response when in doubt.

The tendency for a greater proportion of yes-no unison responses to be recorded undoubtedly reflects the simplicity of that response and the ease with which the group could answer as a group. On the other hand, it also raises some interesting questions about the nature of the questions asked in the first place. Questions allowing for yes-no responses would unlikely have much depth. It was pointed out previously that the personal experiences questions often called for simple yes-no responses. So, too, did the conjecture type questions, although these were more often followed by explanation questions, in order that the reasons for the yes and no responses could be explored in greater detail. That low groups, especially in grade one, were asked fewer questions would account for the lower percentage of yes-no responses.

The similarity between the high and combined groups stands out in the non-reading category. Again the evidence suggests that when pupils who were first identified as high and average readers were grouped together, the content of the lessons follows more closely the patterns of the high rather than the average group.

Teacher Reactions to Pupils' Unison Responses

Teacher reactions to unison responses were categorized as confirming, correcting, and as failure to respond to an incorrect response within the unison response. As the latter is one aspect of the unison response most likely to be criticized, this category was considered important to the analysis.

Teacher reactions to unison responses are recorded in Table N.7 and indicate that most unison responses were acceptable and therefore confirmed (90 percent) by the teachers. Given the need for unison responses to be simplistic, this finding is not surprising.

Table N.7. Frequencies and Percentages of the Different Types of Teacher Reaction to Pupil Unison Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of teacher reactions						
		Confirms or accepts		Reacts to incorrect		Fails to react to incorrect		Totals
		f	%	f	%	f	%	
One	H	193	87	10	4	19	9	222
	A	151	89	7	4	12	7	170
	L	170	94	9	5	2	1	181
Three	H	6	86	1	14			7
	A	28	85	1	3	4	12	33
	*C	62	98	1	2			63
	L	51	86	2	3	6	10	59
Total grade one		514	90	26	5	33	6	573
Total grade three		147	91	5	3	10	6	162
Total sample		661	90	31	4	43	6	735

* Combined high-average group

While teachers did react correctively in some instances where unison responses were heard to be incorrect, they also failed to react. What is interesting is that the incorrect responses from high and average groups were less likely to be corrected than were incorrect responses from low groups. This may only reflect the smaller size of the low group which would make individual responses more audible, yet, one other interpretation is equally plausible. That is, one could argue that teachers expect the better groups to be correct, and, therefore, may not attend as closely to the responses made. In not attending, errors would more likely be ignored. In view of the percentage of solicitations which are responded to in unison, it could be agreed that the more able groups were more likely to have incorrect responses ignored, thus making the pupil having problems less vulnerable to teacher correction. The degree to which this applied to an individual pupil could undoubtedly grow serious over an extended period, and may explain the surprise of some teachers in the test results of certain of the more "able" readers. That the low group errors were more likely to be picked up and reacted to by the teacher, no doubt made a contribution to the greater proportion of Category 7 (criticism) behavior recorded in the Flanders' analysis.

In this section an attempt has been made to describe the group differences in the unison responses of pupils in these classes. Beyond establishing that high groups tended to make more unison responses, the findings have shown that the unison responses of the reading groups differed, and that teachers' reactions to unison responses were to some extent related to the level of the reading group.

In the next section, attention will focus upon pupils' failures to comply with the solicitations.

PART 4: PUPILS' FAILURES TO COMPLY AND TEACHER REACTIONS

The FIER allowed for a record of each instance where a pupil was unable to comply with the teacher solicitation, at least to the extent that a teacher reaction prompting a reply was recorded. The following questions guided the analysis:

(1) How do pupils indicate to the teacher that they are unable to comply?

(2) How do teachers react to pupils who seem unable to comply?

(3) How successful are teacher reactions in getting people to comply?

In Table N.7 (p. 514) where the general responses of pupils were summarized, it was noted that grade one pupils were unable to comply with 10 percent of the solicitations, whereas grade three pupils were unable to comply with 15 percent of the solicitations. There were also few instances where pupils could not be prompted by teachers to attempt to comply. High groups at both levels had more difficulty complying initially.

Several reasons for the difficulties high groups had in responding have been discussed previously, including the possibility that teacher expectations, as articulated in this solicitation, were unrealistic and that high groups, more conscious of their knowledge, did not respond when in doubt about the nature of the solicitation. Later analysis will show that when these pupils were prompted to comply, they were more likely to be correct.

How Pupils Indicate They Cannot Comply

Pupils indicated their inability to comply by remaining silent, as shown by the data summarized in Table N.8. That is, posed with the solicitation, and unable to comply, the pupil simply says nothing. Apparently, it is a fact of classroom life that you need not offer a verbal response indicating you cannot respond, for silence serves this purpose very well. Teachers, cognizant of the meaning of the silence, react accordingly. Given the silence, and no overt response, we find that teachers' reactions tended to be very general as indicated in the types of reactions recorded in the next section.

Teacher Reactions to Pupils' Failures to Comply

When the teachers perceived the pupils' inability to respond, the data in Table N.9 show that the most usual

Table N.8. Frequencies and Percentages of the Different Types of Pupil Indicators of Their Inability to Respond to the Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Pupil indicators of inability to respond						
		No audible response		Verbal indication		Other		Totals
		f	%	f	%	f	%	
One	H	31	88			4	11	35
	A	18	100					18
	L	27	82	1	3	5	15	33
Three	H	3	100					3
	A	19	95			1	5	20
	*C	22	96			1	4	23
	L	19	91			2	9	21
Total grade one		76	89	1	1	9	10	86
Total grade three		63	94			4	6	67
Total sample		139	91	1	0	13	2	153

* Combined high-average group

Table N.9. Frequencies of the First, Second and Third Teacher Reactions to Pupil Failure to Respond to the Solicitations for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Types of teacher corrective reactions to failure to respond										Totals				
		Encourage		Directive		Repetition		Group or Pass on		Teacher answers						
		Reaction	1	2	3	Reaction	1	2	3	Reaction	1			2	3	
One	H A L	6	2	1	2	4	6	2	1	1	1	15	7	3		
		1			3	1	5	3	2		1	3	11	5	3	
		3	3		5		5	3		2	2	1	15	8	1	
Three	H A *C L	1								1		2	1			
		1	2	2	1	2	6	2				9	5	2		
		1		2			4	3	1	2	1	9	3	2		
		5	1	1	3	2	1	3	2	1	2	1	13	6	3	
Total grade one		9	6	1	10	5	16	6	4	2	3	2	4	41	20	7
Total grade three		8	3	1	7	3	3	13	8	2	4	1	1	33	15	7
Total sample		17	9	2	17	8	3	29	14	6	6	4	3	74	35	14

* Combined high-average group

reaction was to repeat the solicitation. In other words, the first assumption appeared to be that pupils failed to respond because the solicitation was not heard correctly or clearly. When the solicitation was not repeated, the reaction usually involved a directive or some form of verbal encouragement. These first reaction patterns were similar at both grade levels, indicating that the behavior may reflect the conditions of the classroom environment, perhaps the crowd conditions described by Jackson (1967).

If the first reaction did not prompt a response, another reaction usually followed. The pattern revolved around these three behaviors--repetition of the question; a directive; and/or an encouraging statement. If the question was repeated and no response followed, then the directive or encouragement would follow. If the directive came first, then the repetition would follow and so on.

It was only when these reactions were unsuccessful that the solicitation was turned over to the group for completion. What usually happened was that the teacher would ask a member of the group to "help." Such "help" often consisted of that pupil providing the right answer, then that answer was repeated verbatim by the original student. To that extent, the pupil did comply with the solicitation.

Apart from these reactions, what was more important was that there were no teacher reactions that really attempted to explore the root of the pupils' inability to comply. The teacher, of course, may have been reacting to the solicitation by recognizing that her solicitation was unclear, and therefore would re-word the solicitation, attempting to retain the same direction. Yet, whatever the specific reaction, the intention seemed to be to get the answer sought after in the first place. Once that was accomplished the lesson moved forward and another solicitation was introduced.

One interesting phenomenon was that there were very few instances when the teacher would actually answer her own solicitation. When it was impossible to get a response from the group, the solicitation was usually aborted, and a different solicitation was introduced.

Teachers seemed very willing to concede that pupils might encounter difficulties dealing with a specific solicitation, as witnessed by the fact that there were very few instances when pupils were reprimanded for failing to

respond.

Some silence could also be interpreted by teachers as reflecting pupils' attempts to work through the response, and perhaps many of their reactions were mainly rhetorical, aimed at filling in the silence gap so as not to lose touch with the group.

Regardless of these points, of greater pedagogical importance for the teaching of reading was the fact that the reactions did not search out the root of the problem behind the pupils' failure to respond. Whatever might be learned from the silence, undoubtedly more could be learned from bringing the problem into the open. There is apparently a serious lack of understanding discussion related to pupils' problems. This may explain, in part, the very low percentage of behavior recorded in Flanders' Category 1 (Accepting pupils' feelings).

Part of the difficulty may rest in the possibility of pupils growing conscious of the value of remaining silent. Reinforcement of that behavior is evidenced by the reactions of the teacher. Yet, what are the long term consequences of a learning environment which is not conclusive to pupils trying out their ideas, regardless of whether they are right or wrong? If the situation is such that the learner develops a growing unwillingness to reveal his inadequacies, much of value in the teacher-pupil interaction could be lost, especially where teachers may learn more about the child by discussing the problems revealed by his responses. Of course, given the tendency for the questions to call for right answers, rather than the expression of ideas, further compounds this problem.

While this discussion has focused on behavior related to pupils' failures to comply with the solicitations, by far the largest proportion of general responses were those in which pupils did try to respond.

PART 5: TEACHER EXTENDING REACTIONS

There was no specific designation of an extending teacher reaction in the FIER instrument; however, when the analysis had been completed, it was apparent that teacher reactions which were either corrective or confirming did have at their base, an attempt to get pupils to extend

their responses. The extending statements examined here, therefore, were drawn out from data originally categorized by one of the other two general categories of teacher reactions. The corrective extending reactions were those where the teacher deliberately sought more information from the pupil, to the extent that more information would make his response more meaningful. The confirming extending reactions were those where the pupil's response was acceptable and the teacher would react by attempting to get the pupil to add to and expand upon his contribution.

The findings for the two types of extending reactions are summarized in Table N.10.

The most obvious difference was that the grade three teachers used both types of extending reactions more often than the grade one teachers. When one considers that the number of actual episodes was much higher (2481) for grade one over grade three (1249) this finding becomes extremely significant in differentiating between the two grade levels. Apparently, the kinds of solicitations aimed at third grade pupils are more challenging, at least to the extent that the pupil responses can be more complex and can be explored in greater depth.

More interesting, group differences were essentially the same at both grade levels in that corrective extending reactions were more often directed at the low group, while confirming extending reactions were more often directed at the average and high groups. Once again the differences in the interaction patterns across the three groups are pointed up, with the pattern of the low group involving a greater percentage of teacher corrective-type behavior. The gap between the high and the low groups in the grade three classes in the percentage of extending reactions having confirming value points up the fact that the two groups were having quite different experiences.

The breakdown for each group in the different classes in Table N.11 showed that all teachers with the exception of Teacher II used extending statements to some extent with their reading groups. In the grade one classes, the tendency was, however, to use corrective extending statements even if confirming statements were not recorded. In the grade three classes there were no teachers who did not use a few extending statements and here the tendency was to use both types with greater regularity across the classes.

Table N.10. Frequencies and Percentages of the Different Teacher Extending Reactions to Pupil Open Responses for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Type of extending statement				Totals
		Request for more information		Encourages extension of acceptable response		
		f	%	f	%	
One	H	7	38	11	62	18
	A	14	67	7	33	21
	L	13	100			13
Three	H	9	47	10	53	19
	A	21	68	10	32	31
	*C	11	55	9	45	20
	L	16	89	2	11	18
Total grade one		34	65	18	35	52
Total grade three		57	65	31	35	88
Total sample		91	65	49	35	140

* Combined high-average group

Table N.11. Frequencies of the Different Types of Teacher Extending Reactions to Pupil Open Responses for Each of the Reading Groups in the Nine Classes

Class	Group	Types of extending reactions		
		Request for more information	Encourages extension of acceptable response	Totals
I	H	2	2	4
	A	8		8
	L	3		3
II	H			
	A			
	L			
III	H	3	4	7
	A	3	6	9
	L	7		7
IV	H		2	2
	A	2	1	3
	L	1		1
V	H	2	3	5
	A	1		1
	L	2		2
VI	H			
	*C	11	9	20
	L		1	1
VII	H			
	*C			
	L	5		5
VIII	H	4	8	12
	A	17	7	24
	L	6	1	7
IX	H	5	2	7
	A	4	3	7
	L	5		5

* Combined high-average group

Table N.12. Frequencies and Percentages of the Different Pupil Responses to Teacher Extending Reactions for the Total Sample, Grade One and Grade Three, and the Reading Groups by Grade Level

Grade	Group	Nature of the response						Totals
		Adequate		Inadequate		Yes-no		
		f	%	f	%	f	%	
One	H	17	85	1	5	2	10	20
	A	21	87	2	8	1	4	24
	L	11	79	1	7	2	14	14
Three	H	18	82	1	4	3	14	22
	A	24	75	8	25			32
	*C	15	75	5	25			20
	L	16	84	3	16			19
Total grade one		49	84	4	7	5	9	58
Total grade three		73	78	17	18	3	3	93
Total sample		122	81	21	13	8	6	151

* Combined high-average group

Pupil responses to extending teacher reactions were grossly categorized as adequate, inadequate, and yes-no. The findings on pupil responses for the two grade levels and different reading groups are recorded in Table N.12. As these figures suggest, pupils did not have great difficulty dealing with the extending reactions of teachers. That the grade three pupils had a little more difficulty probably reflects back upon the differences in the extending reactions, where grade three pupils were called upon to add to their responses, to really extend them, as opposed to completing their responses to make them more adequate.

That yes-no responses are not called for at the third grade level probably suggests that the teachers sought more detail when seeking an indepth response through an extending reaction.

A number of questions which the investigator had hoped to explore in examining pupils' open responses and teacher reactions could not be analyzed because of the limited amount of behavior recorded in the analysis. For example, there were instances when an incorrect response would lead to a very extended response-reaction-response sequence dialogue between the teacher and the pupil. That these patterns of interaction were rare undoubtedly says something about the patterns of verbal interaction characterizing the reading class, but that they did occur also suggests that these behaviors do require to be analyzed. That they could not be analyzed here points to a weakness in the FIER analysis, in that its complexity seriously limited the sample of behavior that could be collected and analyzed.

PART 6: TEACHER STRUCTURING BEHAVIOR

In developing the final form of the FIER instrument, Part One was added in order that teacher-structuring behavior occurring during the reading lesson could be identified. The intention was to describe the structuring behavior in terms of a set of categories, including:

- (1) procedural statements--general directives pertaining to work to be accomplished during the lesson.

(2) directions--specific directives pertaining to an activity at hand.

(3) dictation--where the teacher dictated work and children were expected to respond by completing exercises in their workbooks, etc.

(4) managerial--much like procedural statements except not related specifically to reading (distribution of books, open windows, sharpen pencils etc.)

(5) information--provides information in response to a pupil request--or simply provides information as required.

(6) explanatory--explains.

(7) moralizing--this category was added on the basis of the tendency for some teachers to provide small lectures on the worth of reading; taking information from some aspect of the lesson and generalizing to everyday behavior.

(8) teachers personal experience--where the teacher brought her own experiences in to the lesson.

While these categories did describe the content of the structuring behavior--the simple identification by a category was soon rejected during the course of the analysis because the category identification was perceived as too broad to provide much information. Instead, the comments section was used and the specific behavior observed was briefly described. This was necessary because of the failure of the FIER to account for the time involved in the completion of any act. For example, dictation might extend over the whole lesson, but this would not be indicated by the use of the category--dictation.

The comments recorded in the analysis were treated, therefore, as additional anecdotal data and information from that source has been used in the discussion of the FIER analysis.

These problems in dealing with the structuring behavior were basic to the decision in developing the Observational System for the Analysis of Primary Reading Lessons as a timed-sequence, all-inclusive category system for the analysis of the teaching of reading.

PART 7: PUPIL INITIATING BEHAVIORS

Unsolicited pupil verbal behaviors or pupil initiating verbal behaviors (excluding the corrective statements to peers) were categorized as:

(1) Requests for information.

(2) Unsolicited responses to solicitations--preceding or following the response of another pupil who was the focus of the teachers' reaction.

(3) Statements by pupils unrelated to the reading topic: chats with teacher about incidents at home or play.

(4) Contradicts or argues point with teacher.

In the observed lessons, 331 pupil initiated behaviors were recorded in these different categories, and, therefore, were equal to about 9 percent of the number of episodes initiated by teachers.

The frequencies of the different types of pupil initiated statements by reading groups for the classes, two grade levels and the total sample are recorded in Table N.13. Unlike many of the other behaviors examined in the FIER analysis, the two grade levels were more equal in terms of the number of behaviors recorded in this category, especially when the difference in the number of classes at the two grade levels are considered.

The results show that pupil initiated statements largely reflect pupils' attempts to take the initiative in responding to teachers' solicitations. Apparently, when teachers state the solicitation prior to identifying the respondent, a pattern that emerged in the FIER analysis, pupils may interpret the behavior as a call for a volunteer, take the initiative in adding to or extending the response of another pupil.

Pupils also initiated interaction with the teacher in order to ask for information. The transcripts suggested that many of these statements were requests for clarification of the independent tasks or requests to have teachers pronounce words during silent reading activities.

Had a different decision been made about the point at which a group lesson was considered terminated, more pupil

Table N.13. Frequencies of the Different Types of Pupil Initiating Behaviors in the Reading Groups in the First and Third Grade Classes

Grade	Class	Type of pupil initiating behavior by group												Total	
		Asks for information			Unsolicited response related to topic			Unsolicited response unrelated to topic			Argues point with teacher				
		H	A	L	H	A	L	H	A	L	H	A	L		
One	I	2	3	2	15	7	15		4	3		1			52
	II	3			3	1		1	1						9
	III	3	9	1	19	11	6	1	4	2		1	1		58
	IV		4	3	6	5	8			1					27
	V	1	5	2	3	4	6	2	2						25
Three	VI		*1							3	*		1		34
	VII		*4	12		*5	6		*			*1	1		29
	VIII		1	1	2	38	12		1			1	4		60
	IX		4		6	6	16			3		1	1		37
Grade One		9	21	8	46	28	35	4	11	6	1	1	1		171
Grade Three			10	13	8	56	56		1	6	2	6	2		160
Total		9	31	21	54	84	91	4	12	12	3	7	2		331

* Combined high-average group

initiated statements in the "unrelated to topic" category may have been categorized. That is, the anecdotal record suggested that while the reading group was breaking up, individual pupils would sometimes use this time to chat with teachers about a personal matter. This interaction was not captured in the present analysis, except where pupils would interject such statements just before the teacher gave the directive for the group meeting to end.

The breakdown for the reading groups at the two grade levels and across the classes suggest no trends. It is interesting that in Class II, however, where pupils recorded the greatest proportion of pupil-initiated corrective behavior that pupils recorded the least pupil-initiating behavior in these other categories.

Teacher reactions to the pupil initiated behaviors are recorded in Table N.14. Three types of reactions were identified, including:

- (1) Reacts to the content of the pupils behavior: (gives information, accepts unsolicited response).
- (2) Ignores the pupils' behavior
- (3) Reprimands pupils

The findings show that teachers tended to react to the contribution or questions of the pupil within the context in which the statement was offered. That is, they provided information where requested or responded in an accepting way to pupils' contribution. On the other hand, there was also a tendency for the contribution of pupils to be ignored, at least to the degree that teachers did not react verbally to the pupils contributions. There were very few instances where pupils were reprimanded for their attempts to initiate the interaction.

Table N.14. Frequencies of the Different Types of Teacher Reactions to the Pupil Initiated Behaviors by Reading Group for Each of the Nine Classes

Grade	Group	Teacher reactions by group											
		Reacts to			Ignores			Reprimands			Totals		
		H	A	L	H	A	L	H	A	L	H	A	L
One	I	10	8	16	6	1	3	2	5	1	18	14	20
	II	4			3	2					7	2	
	III	21	7	7	2	2	1		2		23	25	8
	IV	4	8	10	2	1	2	1			7	9	12
	V	5	1	6	1	8	1		3	1	6	12	8
Three	VI		8	10			15			1		8	26
	VII		5	18		1			4			10	18
	VIII	3	29	8	1	10	3				4	29	11
	IX	5	8	13			6	1			6	8	19

APPENDIX O

SAMPLE PAGE REPRODUCED FROM THE TYPEWRITTEN TRANS-
SCRIPTS PREPARED FROM THE AUDIO RECORDINGS WITH THE
THREE SECOND INTERVALS IDENTIFIED BY A SLASH

NOW WHO COMES ALONG? / (Teacher)

father / (Unison response)

FATHER / WHAT WAS FATHER DOING MICHEAL? /

paint / (pupil response)

PAINT.. THATS RIGHT. / *Teacher reaction* AND WHAT HAS HE IN HIS OTHER HAND RODNEY? /

A Ladder /

ON HIS HAND..THATS A LADDER AND SO HE'S GOING TO PAINT /

WHAT DO YOU THINK TOME IS SAYING TO HIM KENNIE? /

!!!! / (no response) Please will you get Friskey down /

THATS RIGHT. / DO YOU THINK HE WILL GET FRISKEY DOWN? /

Yes /

I THINK SO TOO /

NOW WHO READS FIRST ON THIS PAGE? /

(father) *unsolicited* / /

IT TELLS YOU AT THE TOP / /

BARBARA..ON THIS PAGE..IT TELLS YOU WHO IS TALKING FIRST..WHO IS

father /

NO /

Tom /

ALL RIGHT. / WHO WOULD LKE TO READ WHAT TOM SAID. / MICHEAL? /

Father / Father said Tom. /

Friskey is up. / (the tree) *pupil correction* up. / the tree

is. Friskey will not come down /

YES. / AND NOW WHO IS TALKING? /

Betty / / /

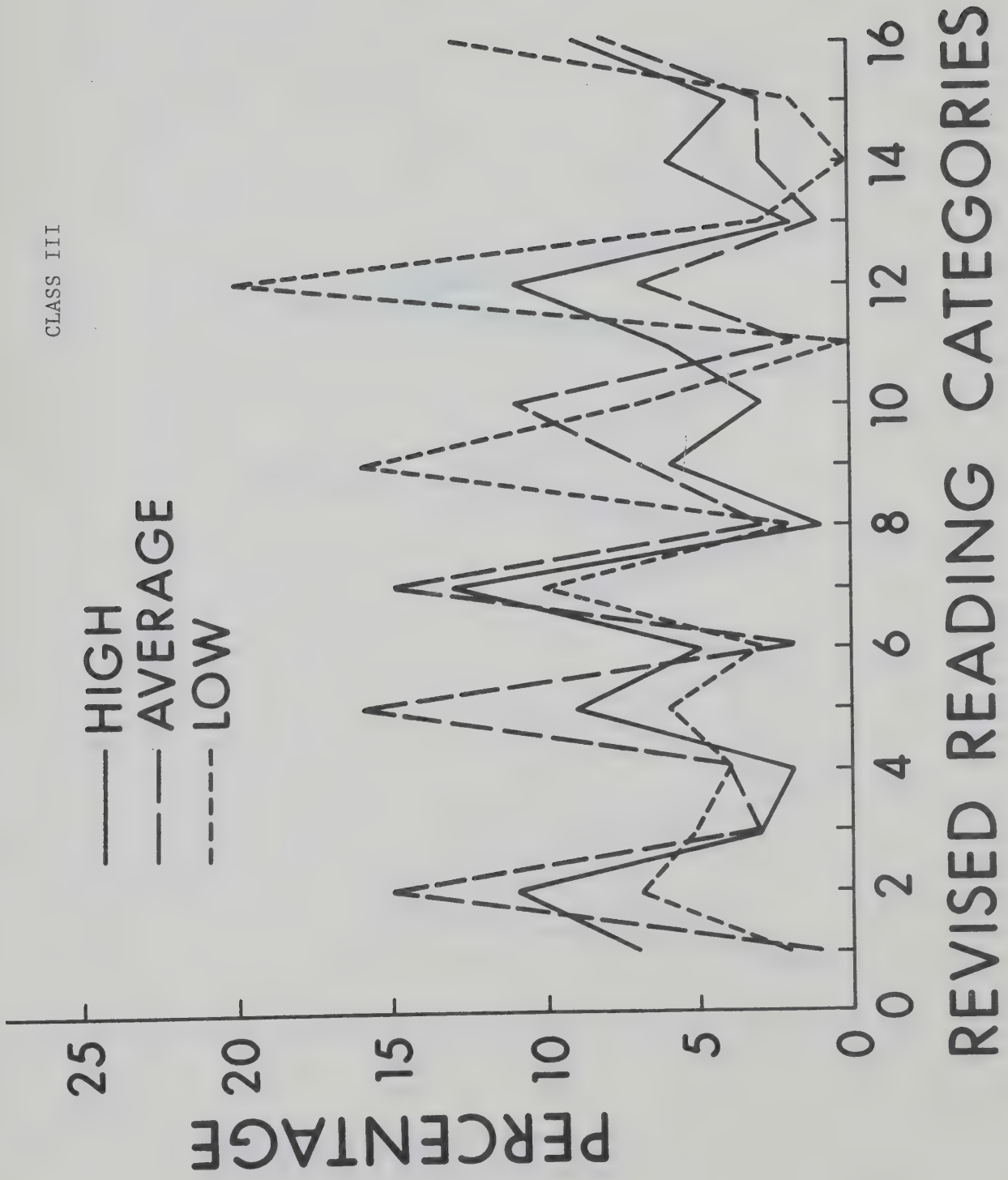
BARABARA WOULD YOU LIKE TO READ WHAT BETTY SAID /

Betty said. / Please / Father. Please do / something (to)

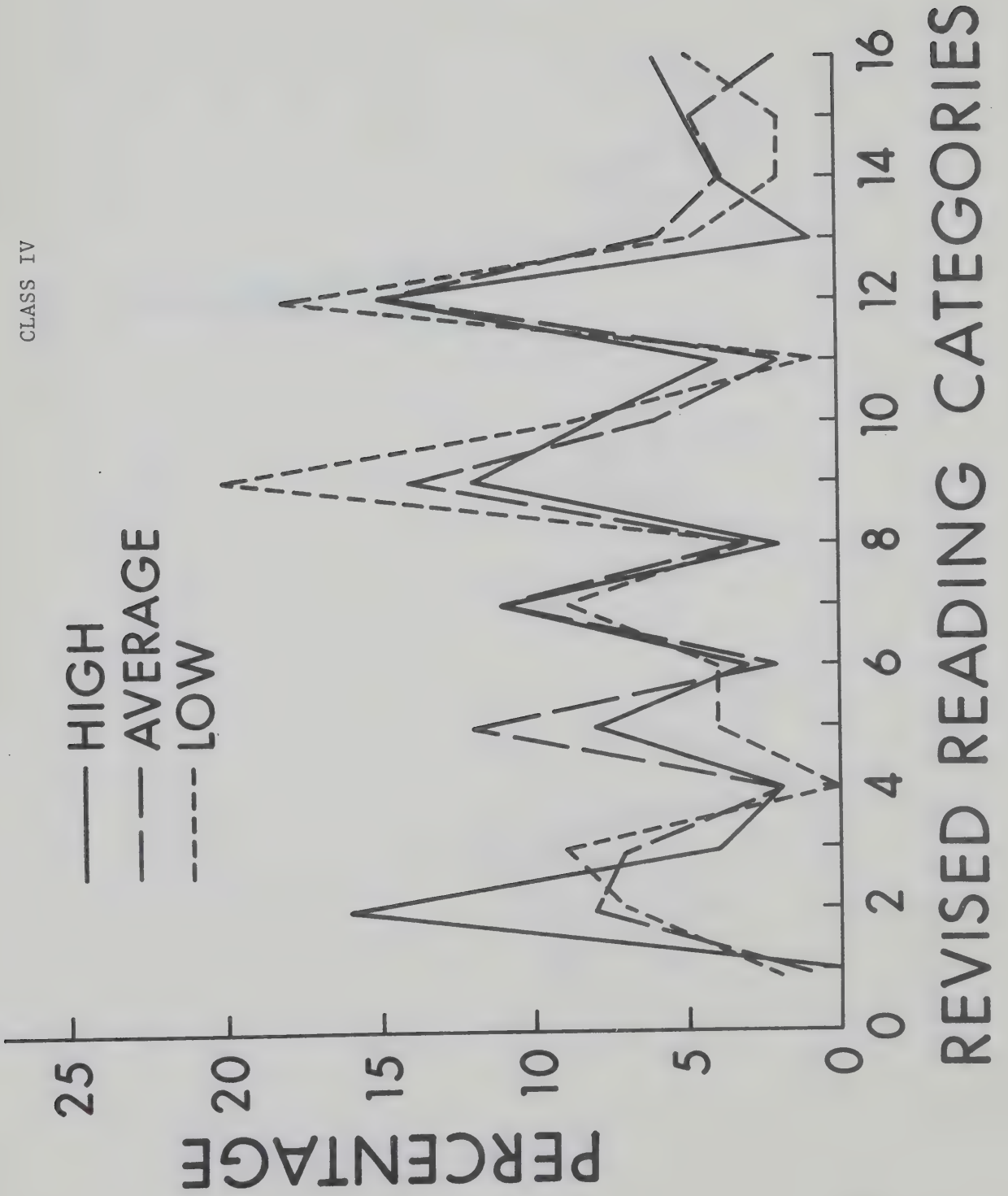
for / Friskey (little) little Friskey / / /

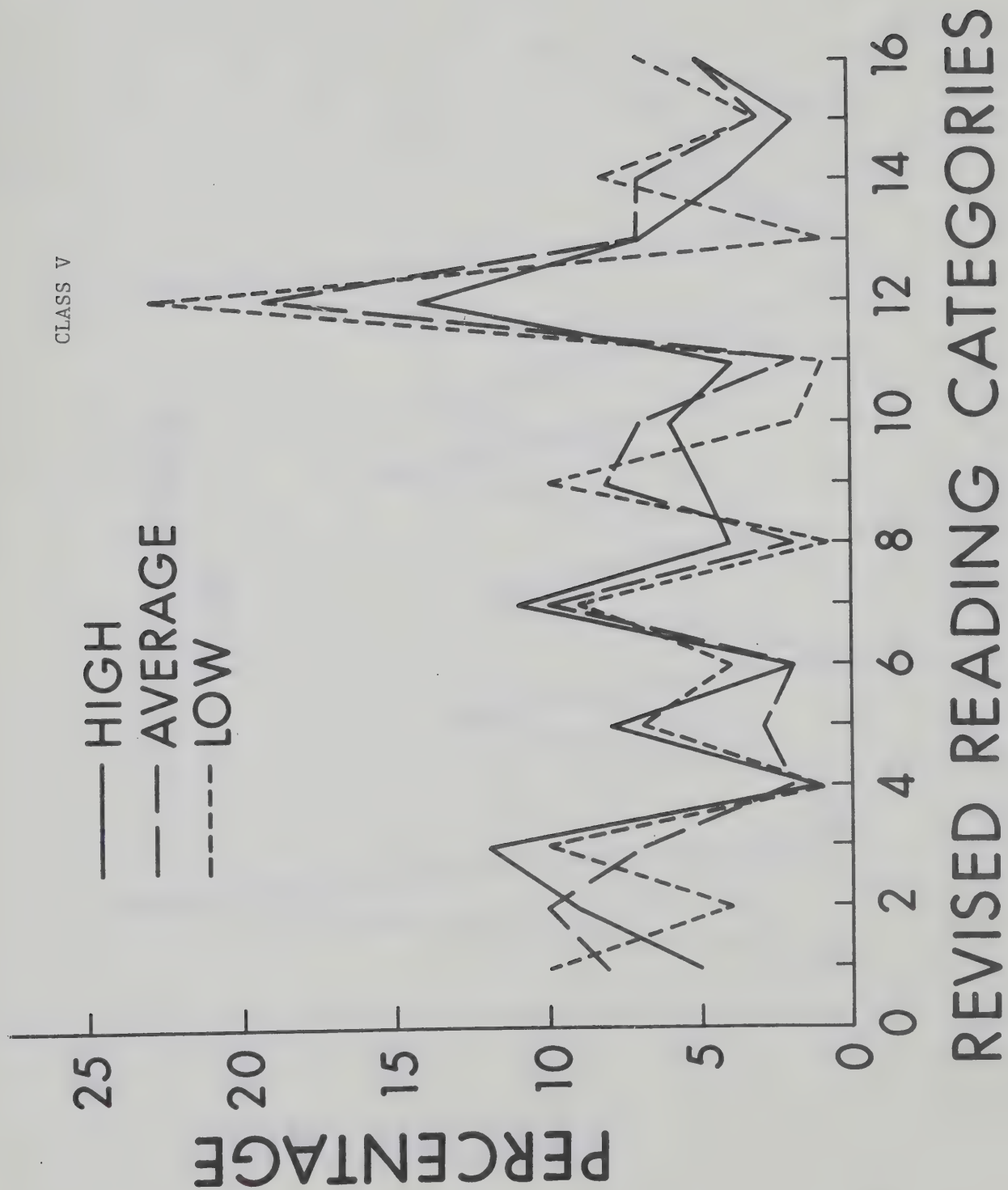
APPENDIX P

GRAPHIC REPRESENTATION OF THE PROPORTIONS
OF THE READING CATEGORIES (1 to 16) FOR
THE READING GROUPS IN SELECTED CLASSES

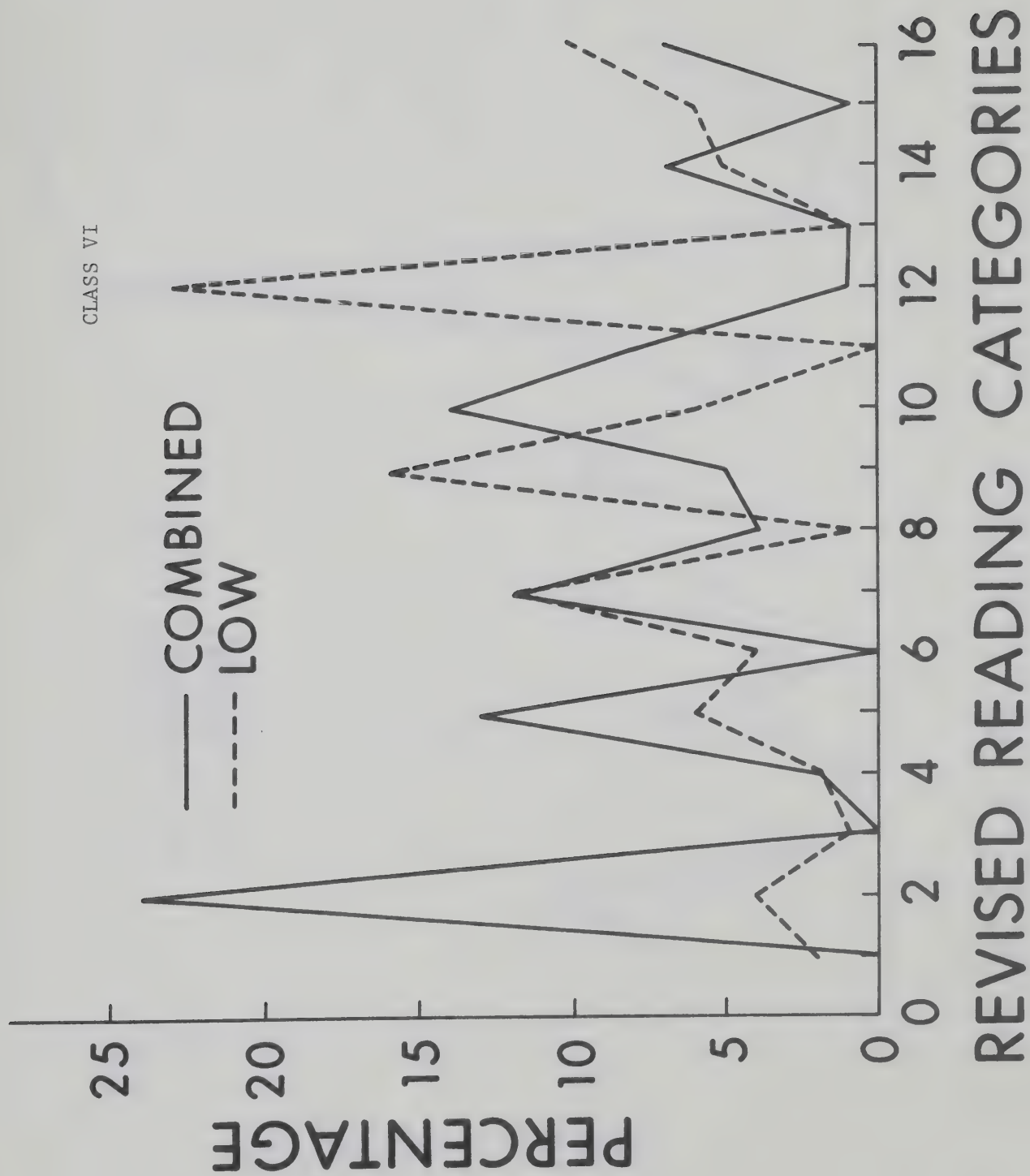


CLASS IV

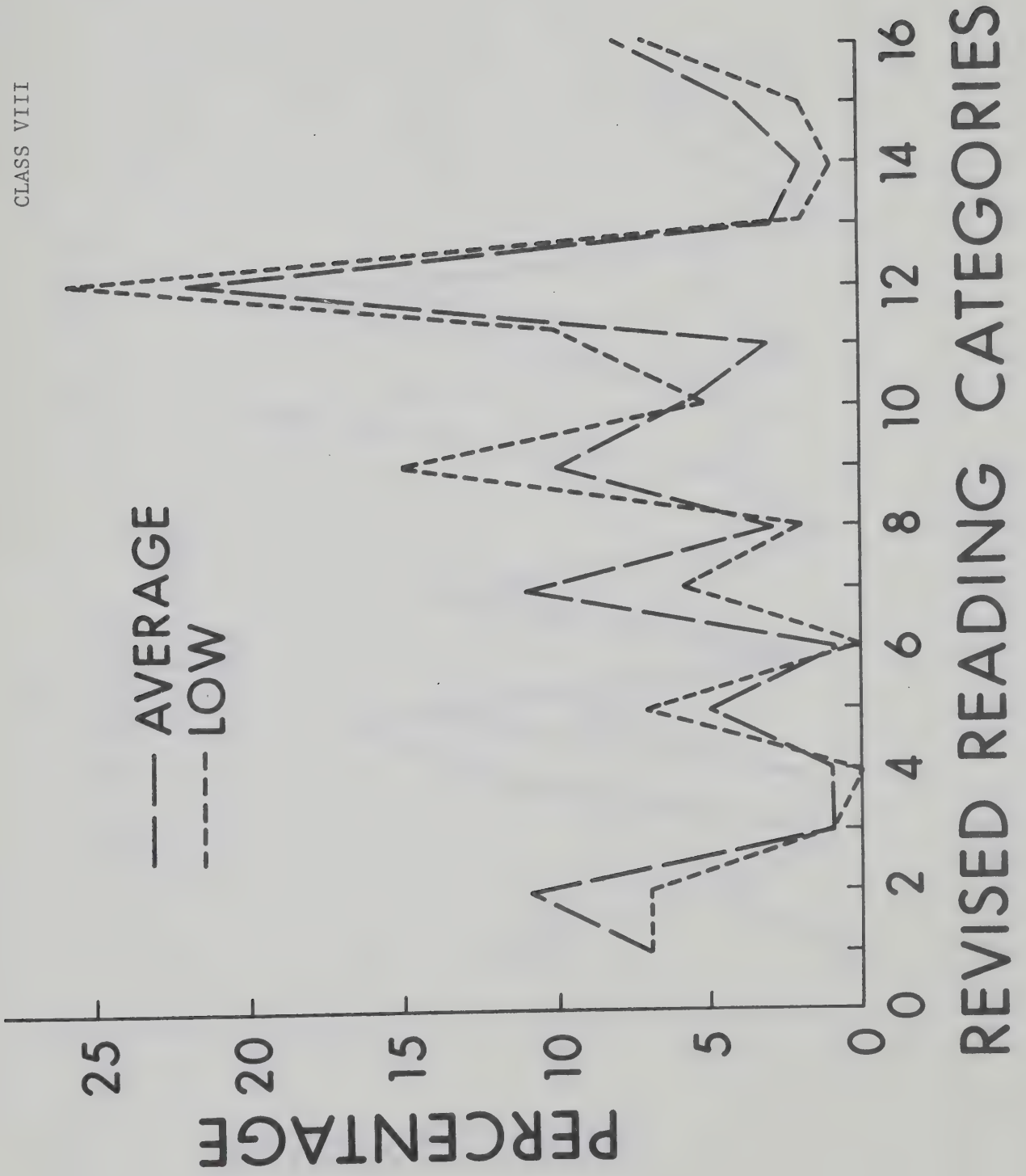




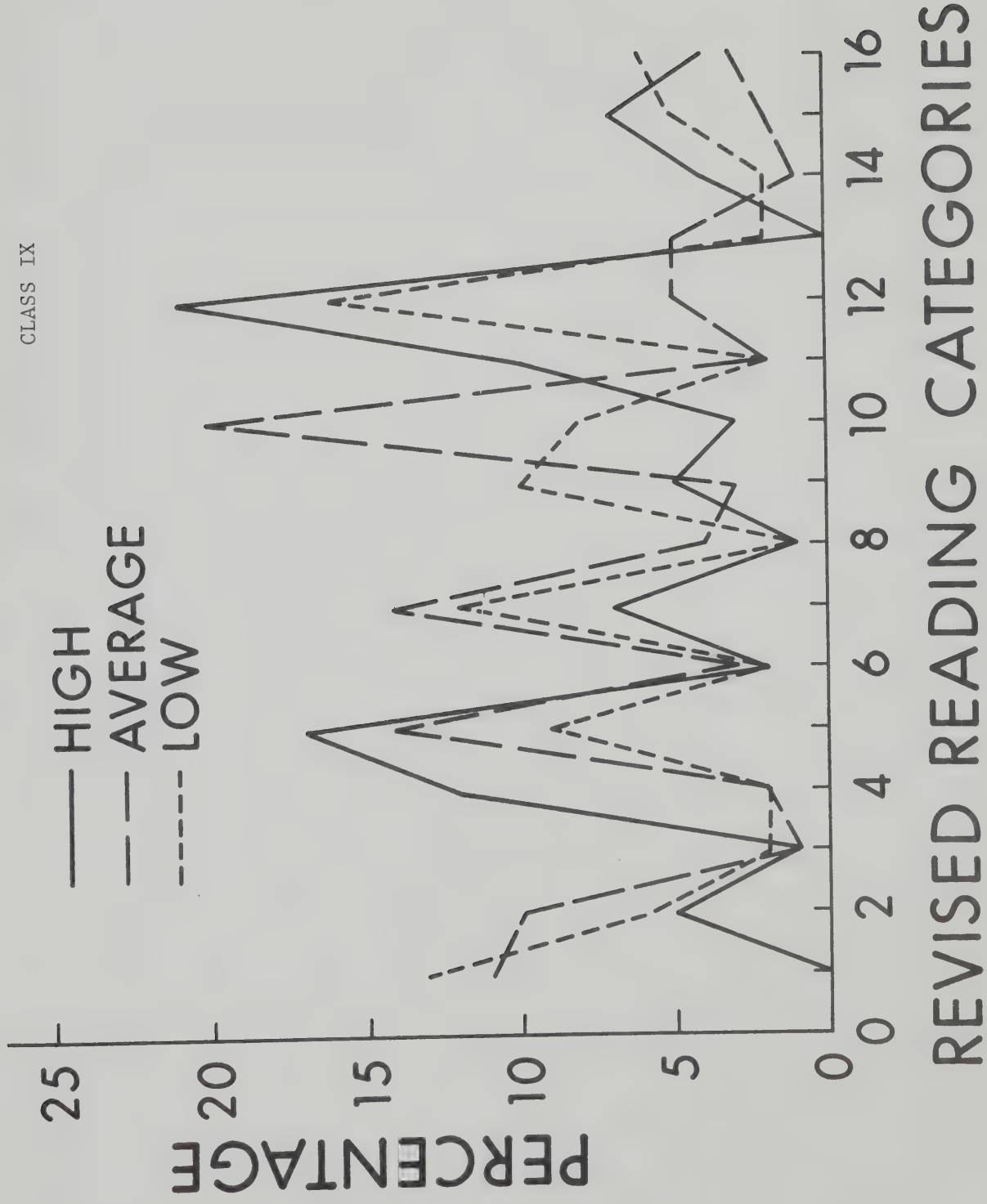
CLASS VI



CLASS VIII



CLASS IX



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